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ABSTRACT

Among the adjustments that international students encounter when studying at colleges in the United States is the transition to independent research in an American university library. Studies indicate that Non-Native Speakers of English is the population most likely to suffer from library anxiety and therefore most at risk for lowered academic achievement. In addition to overcoming differences from their national education systems and library cultures, international students also face language barriers that escalate difficulties in help-seeking behaviors and formulation of search strategies. Recent literature showcases the development of critical thinking as one of the most important facets of information literacy instruction programs. The way this emphasis interfaces with the particular needs of international students is analyzed to produce conclusions concerning effective strategies for working with international students. The contribution of adult learning theory, the impact of active learning experiences, and the correlation between learning style and teaching method and are all addressed. Faculty and international student focus-group responses mirrored the discussions found in the literature and the recommendations offered. (Contains 208 references.) (Author/AEF)

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INTERNATIONAL STUDENTS AND THE AMERICAN UNIVERSITY LIBRARY

A Thesis

Presented to

the Department of Education

School of Arts and Sciences

Biola University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

by

Beth Ann Patton

May 2002

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ABSTRACT

INTERNATIONAL STUDENTS AND THE AMERICAN UNIVERSITY LIBRARY

Beth Ann Patton

Among the adjustments that international students encounter when studying at colleges in the United States is the transition to independent research in an American university library. Studies indicate that Non-Native Speakers of English is the population most likely to suffer from library anxiety and therefore most at risk for lowered academic achievement. In addition to overcoming differences from their national education systems and library cultures, international students also face language barriers that escalate difficulties in help-seeking behaviors and formulation of search strategies.

Recent literature showcases the development of critical thinking as one of the most important facets of information literacy instruction programs. The way this emphasis interfaces with the particular needs of international students is analyzed to produce conclusions concerning effective strategies for working with international students. The contribution of adult learning theory, the impact of active learning experiences, and the correlation between learning style and teaching method and are all addressed. Faculty and international student focus-group responses mirrored the discussions found in the literature and the recommendations offered.

INTERNATIONAL STUDENTS AND THE AMERICAN UNIVERSITY LIBRARY

M. A. Thesis

Presented to

the Faculty of the Department of Education

Biola University

La Mirada, California

USA

By

Beth Ann Patton

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CHAPTER 1

INTERNATIONAL STUDENTS

For decades, librarians have considered instructing patrons in the use of the library one of their major roles. Though philosophies differ in public libraries and corporate libraries, the purpose in academic library instruction has always been to enable students to learn research practices for independent use as lifelong learners. This dedication to library user education includes students who come from other countries to study in colleges and universities in the United States. For decades, American educators have debated the issue of how best to teach students whose native language is not English. How the commitment to information literacy instruction intersects with international students at the American college and university is the focus of this thesis.

Definitions and Statistics About International Students

The Institute of International Education (2001, 2002) has collected statistics about foreign students since 1954/55 and annually publishes the report *Open Doors: Report on International Education Exchange*. It defines foreign or international students as those in college or university who are neither resident aliens on work visas nor permanent residents or citizens. In 1959/60, international students accounted for 1.4% of the total United States college enrollment, and that percentage has increased nearly every year since then until 2000/01 when the percentage was at its highest, 3.9%. The 2000/01 school year showed the largest increase since 1979/80 (Institute of International

Education, 2002). Personal or family finances fund 67% of foreign students, and in recent years there has been a substantial movement toward attendance at community colleges to take advantage of their typically lower fees. Asia presently sends 54% of the total number of foreign students to the United States, with China, India, and Korea as the leading countries. Statistics indicate that the majority of international students are undergraduate, male, and single. Although they study a wide range of subjects, 20% of foreign students major in business or management (2001). Despite these generalizations, many individual universities will find that their international student population differs greatly from the majority description.

Characteristics of International Students

International students are not the Statue of Liberty-eulogized huddled masses, wretched refuse, homeless, tempest-tossed (Kumar & Suresh, 2000, p. 332). Instead they are usually middle to upper class, often the upper echelon of intellectual society in their homelands. Most are well-educated and well-read, perhaps among the educational or social elite (Preston, 1992). International students are usually sent to study in America either because they offer the most promise or because they are already the most respected or most powerful in the institution in which they teach or work. They may represent the hopes and expectations of entire communities.

With this burden on them, Non-Native Speakers of English (NNSE) international students are more motivated to make necessary adaptations than immigrants since they are "people in transition" (Mori, 2000, ¶ 3). Focused on their education, international students recognize that their accommodation of American culture is temporary and short-lived (Mori, 2000; Thomas & Harrell, 1994). Lee (1991), herself a former international

student, explains that international students tend to be acquiescent and believe that school is the one place in the English-speaking world where they should be able to compete on an equal basis. International students are receptive and strongly motivated, and the library survey Kline and Rod (1984) conducted indicated that personal contact with college or university staff is a highly significant factor to international students. Ogbu (1991) maintains that non-immigrants value education and buy into the American dream, believing that if they work hard and become educated, they will be able to succeed. Unlike those immigrants who have either received the majority of their education in the United States or who received little education in their home countries, international students have a basis for comparing experiences in their home countries with those in the United States. They consider American education important because it is seen as a way to improve language skills and thus enable them to get better jobs.

In order to be eligible to study in the United States at a college level, international students have invested considerable time studying and practicing English prior to their arrival; they thus have high expectations of their ability to study in English (Greenfield, Johnston, & Williams, 1986). Since it is typically the most proficient English speakers who choose to study in the United States, it is likely that international students were praised and respected for their fluency while in their own countries. If they arrive at an American university and have social and academic language difficulties, a high level of frustration and stress can occur.

Cross-Cultural Adjustment

According to Lingenfelter and Mayers (1986), culture is the sum of the distinctions of a people's society by which they organize components of life, view their

experiences, and appraise the motives and behaviors of others. Much has been written about the adjustments that any cross-cultural experience brings. Emigh's (1991) interviews with international students revealed that the major transition they make is the social and cultural adjustment, which has ramifications in the classroom where group discussion or small group work underscores their alienation. Varying views on personal space needs, mores about nonverbal language, even the structure of a language that delineates between formal and informal forms of address are all areas of potential tension and misunderstanding. For example, aspects of Korean culture such as a hierarchical social structure, the desire to avoid loss of face at any cost, and strong family obligations can manifest themselves to Americans as self-absorption—to the neglect of others in need (Korean Constituents Think Tank, 1990). The Korean Constituents Think Tank cites these principles as examples of sources of misinterpretation on the part of the host and often-insurmountable hindrances to adjustment to the United States on the part of the guest. Thomas and Harrell (1994) label international students as "sojourners", and they affirm that sojourners feel they lack power because they do not have the necessary skills or information to function properly in American society. For some international students, their purpose in attending college in the United States may be more to get accustomed to American culture than to get an education (Kathman & Kathman, 1998; Zimmermann, 1995), a reminder that the concerns of international students range further than the classroom. Stephanie Zimmermann's study of international students' communication experiences on an American university campus demonstrated that interaction with Americans was the greatest variable in adjustment to American culture, and she suggests

that classroom activities should facilitate more interaction for international students with American faculty and students as well as other international students.

Fieg and Yaffee (1977), Morain (1987), and Kathman and Kathman (1998) each emphasize the importance of the nonverbal channel of expression, including eye contact and facial expressions, and how a variety of attributed meanings in various cultures can produce difficulties both in the classroom and in personal interaction. The cautions, repeated over three decades, make it obvious that some difficulties in cross-cultural adjustment persist despite the increased diversity throughout the world.

In many cultures, aggression is the prescribed way to deal with bureaucracy or with those of lower social or economic status. Such behaviors, unacceptable in American educational society, heighten the alienation that can be created between international students and the university community (Brown, 2000). Another major area of contention between individuals from diverse cultures is the task/goal orientation versus person orientation. "A pattern of avoiding confrontation is characteristic of many non-Western cultures. Mediators are essential in such cultures to build relationships or to repair the breaches that conflict has torn in the fabric of social relations" (Lingenfelter & Mayers, 1986, p. 113).

International students are not a one-dimensional group, and Brown (2000) cautions that it is not helpful to stereotype international students either as members of a single culture or as a generic class of non-Americans. Taking the opposite view, Jensen and Jensen (1983) maintain that many students of varied Asian nationalities share similar values and experiences, and American educators will find knowledge of these values and experiences helpful in working with Asian international students.

Craig Storti's book title *Figuring Foreigners Out* (1999) at first seems politically incorrect and offensive. His practical guide, however, makes it clear how foreign people feel when they encounter and interact with cultures whose values and orientations are radically different from their own. Storti maintains that cross-cultural awareness, the recognition that a culture's values impact its methods of communication and behavior, is a necessary aspect of cross-cultural adjustment by both the host culture and those who are guests in the culture. Noting that many aspects of society and culture are not verbalized or taught, but rather implicitly understood by members of that culture, Archer (1994) speaks of a "covert culture". Because certain issues are so ingrained or unconscious, they are not discussed or taught to those entering the culture. These nuances are often the very things that cause the most difficulty for those trying to adjust to another culture. In a speech to the Foreign Language Association, Genelle Morain (1987) captures the dilemma:

> I grew up in Iowa and I knew what to do with butter, you put it on roastin' ears, pancakes, and popcorn. Then I went to France and saw a Frenchman put butter on radishes. ... I realized then something I hadn't learned in five years of language study: not only was *speaking* in French different from speaking in English, but *buttering* in French was different from buttering in English. And that was the beginning of real cross-cultural understanding. (p. 117)

CHAPTER 2

THE NEED FOR INFORMATION LITERACY INSTRUCTION

Librarians historically called teaching library and research skills "bibliographic instruction", which implies acquiring skills needed to navigate the library. Bibliographic instruction traditionally included a physical orientation of library facilities and resources as well as instruction on how to search and understand the entries of the library's catalog and indexes or databases, first printed and later in computerized formats. (See Fullerton & Leckie, 2002, for an overview of the history of bibliographic instruction.) Though not excluded, critical evaluation of information and the creation of a research strategy were often neglected due to time constraints. More recent programs propose that instruction by librarians be process-oriented rather than tool-oriented (Kuhlthau, 1988, 1993). Expanding the concept of bibliographic instruction, professional librarians and library associations now embrace the phrase "information literacy", which embodies the ability to effectively plan research, to efficiently gather information, to critically evaluate information and sources, to properly use information, and to ethically acknowledge sources. (See Association of College & Research Libraries [ACRL], 2001, as an example of one organization's guidelines.)

Libraries play an integral role in the process of completing classroom assignments and conducting research. Since Western universities emphasize independent research, it is necessary for international students to learn basic research skills, how to choose tools,

and how to interpret information (Ball & Mahony, 1987; Grimes, 1997). Academic libraries present unfamiliar territory for many incoming students, especially international students, and the desire to avoid failure and the appearance of ignorance can lead to anxiety. Kasper (2000) believes that many English as a Second Language (ESL) students find research daunting because of their limited language skills and their lack of preparation in using appropriate technology. For these students, "strong critical literacy skills are key to the research papers that are a central component of many mainstream college courses" (p. 187). [In this thesis, ESL is used only when an author specifically designates students as part of a campus English as a Second Language program.] Studies of the relationship between library anxiety and achievement indicate that library anxiety can lead to the avoidance of research behaviors, inevitably resulting in low achievement and poorly researched papers.

Library Anxiety

Anxiety in any context can be a debilitating emotion with significant behavioral ramifications, and in the classroom or any situation involving research, it can adversely affect the way students approach their tasks, often causing avoidance. The loss of face and the fear of appearing foolish or incompetent are powerful controlling factors for many students. Various researchers point to the detrimental effect that anxiety can have on the ability to accomplish tasks or perform skills. In his study about self-defeating ego-orientation and motivation, Skaalvik (1997) discloses that students who are highly concerned about not appearing stupid are particularly vulnerable in achievement situations, and Lucking and Manning (1996) identify being overanxious about making mistakes in front of peers as one of the primary causes of low achievement. Logical

thought and decision making happen in the neocortex of the brain, but when a person is anxious, threatened, angry, or fearful, the blood flows out to the limbic system instead and thus "downshifts" to prevent rational decision making and to make a person less flexible (Christison ,1999a). Students should feel challenged, she contends, but not threatened. Vidmar (1998) acknowledges, "The way someone feels ultimately will help determine behavior. Individuals use emotions and feelings to prioritize information and reach decisions that can, in turn, initiate a course of action" (p. 75).

Definitions of Library Anxiety

Qun Jiao and Anthony Onwuegbuzie (1995), librarians who have done a number of studies on various aspects of library anxiety, articulate a definition of library anxiety which other researchers share: "An uncomfortable feeling experienced in a library setting which has cognitive, affective, physiological, and behavioural ramifications. It is characterized by negative self-defeating thoughts, and mental disorganization, which debilitate information literacy" (p. 2). One of the initial developers of the concept of library anxiety, Constance Mellon (Collins, Mellon, & Young, 1987) found in her surveys of college freshmen that 75% to 85% viewed the library as scary, overpowering, and confusing. One native English speaker commented, "'It was like being in a foreign country and unable to speak the language'" (Mellon, 1986, p. 162). Mellon proposes that the key elements of this fear include the feelings: (a) "I am inept, but everyone else knows what to do"; (b) "I am incompetent which is embarrassing, and I don't want anyone to know"; and (c) "I won't ask questions or I might reveal my ignorance."

Egan (1992) notes that in students' first attempts to use a university library, they are overwhelmed by size, by choices, and by strangers. Even asking for help is

overwhelming—they think their questions are too simple, or they do not want to bother the staff. In Mellon's (1989) investigations, students responded to library research in terms of fear, using words like "lost" and "helpless". One of the participants in her study described the library as "'a huge monster than gulps you up as you enter it'" (p. 78).

Sources of Library Anxiety

Four sources of library anxiety were identified in Mellon's (1986) research: (a) size [despite the fact that her initial research was done in a small three-floor library, most students said the size was a source of concern]; (b) lack of knowledge about where things are located in the building; (c) where and how to begin research; and (d) how to actually conduct research. Library anxiety may also be due to (a) barriers with the staff [unapproachable, intimidating, or busy]; (b) affective barriers [negative social evaluation or appearing ignorant]; (c) lack of comfort with the library [unsafe or unwelcoming]; (d) lack of knowledge of the library [unfamiliarity with resources and procedures]; and (e) technical barriers [reliance on unfamiliar equipment such as computers, photocopiers, microform readers/printers] (Jiao & Onwuegbuzie, 1998). Concluding that technological barriers are the most worrisome factors, Natowitz's (1995) meta-analysis about international students in the library highlighted that almost all of the anxiety involved using computers.

In a survey of library service satisfaction, Cook and Heath (2001) revealed a pervasive attitude among respondents: they want to be self-reliant and self-sufficient; they do not want to bother librarians; they do not want to display their ignorance. Cook and Heath's interviews suggest that patrons tend to form an attachment to a person who has helped them in the past, in order to avoid displaying their perceived ignorance to a

new stranger. This is especially true of international students who attempt to establish an ongoing bond with individual library staff members. Even so, students still may have mixed feelings of guilt about the necessity of asking for help.

Another source of library anxiety, according to Egan (1992), is that students, especially undergraduates, fear what William Perry (1998) calls "multiplicity"—that there is more than one right way of doing things, and that there is not always one right answer. Students may view librarians' attempts to present a variety of possible resources and research techniques with apprehension since they are yet unable to reach the level of being comfortable with multiple answers (Collins et al., 1987; Mellon, 1989; Mellon & Pagles, 1987). Cerise Oberman (1991) dubs this the "cereal syndrome", as students are unable to select one option when faced with too many choices, and thus they abandon the research process out of overwhelming confusion.

Because students are often seeking the one right way to search for information, multiple correct possibilities create anxiety (Kuhlthau, 1993). For the same reasons that Oberman (1991) cites, Kuhlthau (1988) says that the acts of receiving assignments in class and being forced to choose and focus topics in themselves produce anxiety so that students bring this uneasiness to the library experience even before entering the building or beginning research. In Mellon's (1986) study, how to begin an assignment produced the most fear among students, more than did problems encountered during information gathering. Originally done with high school seniors and later replicated and verified in both academic and public libraries, Carol Kuhlthau's (1988, 1993) research suggests five stages in the information-seeking process. The first three stages of information seeking—initiation of the task, selection of the topic, and exploration of the prefocused topic—

create and sustain the most anxiety, more than the collection stage of resource gathering or the presentation stage of writing and revision do. Keefer (1993) applies Jerome Bruner's "hungry-rats syndrome"—skill decreases with anxiety—to the library. She concurs that the majority of anxiety comes in topic selection. Keefer observed that "anxiety overdrive" made students too eager so that they could not "get through the maze" of the research process, ignoring or misinterpreting the clues which could help them. Reminiscent of Christison's (1991a) description of how fear affects the brain, Keefer (1993) states that anxiety makes a person so rigid they cannot transfer learned skills or broaden known strategies. She maintains that library anxiety affects both mental and creative thinking, and "even the physical locating operations are easily degraded" (p. 334).

At-Risk Populations

Although many, perhaps most, people experience library anxiety to some degree in their initial library visits, and perhaps again when beginning a new project or using an unfamiliar resource, some populations are more likely than others to exhibit library anxiety in a university setting. Jiao and Onwuegbuzie's (1999) investigation of library anxiety documented that international students are the category of students most at risk to exhibit library anxiety and least likely to successfully use the library. Cultural and communication differences also make NNSE (Non-Native Speakers of English) uncertain about the level of services offered in a library and about expected behaviors (Jiao & Onwuegbuzie, 1995). Language barriers; limited library and library technology experience in their home countries; and university library instruction designed for typical students also produce uneasiness for NNSE (K. Downing, MacAdams, & Nichols, 1993).

In addition, their English language skills and other cultural values may produce "communication/conversation apprehension" (M. Liu, 1995, p. 125) and cause international students to rely on friends rather than librarians for information or instruction.

Jiao and Onwuegbuzie encourage librarians to be proactive in approaching and reaching international students—to look for verbal and nonverbal clues of lack of understanding. Their 1999 investigation of international students indicates that international students tend to visit the library more, but have higher anxiety in using it than other populations. Surveys (1995, 1999) disclosed that library technology and mechanical barriers [problems with operating machines]; affective barriers [such as the fear of appearing ignorant]; and barriers with staff [perceived as unapproachable, intimidating, or too busy], caused the most worry among international students. However, their 1998 research with graduate students who were not international students identified the same barriers. In some countries, librarians are simply retrieving clerks or have low social status, so the necessity of approaching a librarian for help produces social humiliation, and because many graduate international students are competent, respected figures in their fields, Cope and Black (1985) and M. Liu (1995) speculate that inability to function in an American university library is especially upsetting and embarrassing.

Other groups of students are also at risk for high library anxiety, and belonging to one of these other groups in addition to being an international student may further compound an international student's difficulties. Mech and Brooks (1997) did not find gender or academic measures such as SAT scores or high school GPA to be important variables in library anxiety, but Jiao and Onwuegbuzie (1995, 1998) allege that gender is

one of the most significant variables in library anxiety because "males attach greater meaning to work-related, achievement-related stressors" (1998, ¶ 20). For cultures where this work-related ego orientation exists, male international students may be at a double disadvantage. Learning styles are also related to high library anxiety (Onwuegbuzie & Jiao, 1998). Peer-oriented and group learners, as well as those who dislike multiple choices, tend to exhibit high library anxiety. In addition, visual learners, who perhaps do not like the hands-on learning necessary in a library environment, are another at-risk population. Both self-motivated students and those with lack of persistence scored high on measures of library anxiety, as did those who prefer to work in the afternoon. Self-motivated individuals may dislike asking for help, thus creating tension when they find themselves needing help. The fact that afternoons are often the busiest times in the library escalates nervousness for afternoon workers when the likelihood of others observing their incompetence increases. Onwuegbuzie and Jiao surmise that those who are easily discouraged find the library too full of challenges, asserting that sometimes experience with the library simply highlights an individual's inadequacies, so for those with fear of appearing foolish or incompetent, pure experience alone is not the solution. The authors challenge librarians to offer opportunities for cooperative learning groups and sharing attitudes that might help to negate feelings that "only I am imperfect."

Although some of the library anxiety studies cited were conducted with limited population groups, the fact that most researchers come to similar conclusions gives credence to the inferences drawn. As with all surveys that rely on self-reported estimations of feelings, there is a potential difficulty in the variance of individual understanding of terms on the scales. Despite these possible drawbacks, the literature on

library anxiety reviewed here is consistent with this author's anecdotal evidence and experience as an information literacy instruction librarian.

Reducing Library Anxiety

One major strategy for reducing library anxiety is simply to address the fact that it occurs. Librarians must encourage students to realize they cannot master the mushrooming number of resources available, nor do librarians expect them to do that (Mark & Jacobson, 1995). Confessing that she gets depressed about the amount of information students remember from orientations, Mellon (1989) insists that the significant element of instruction is the interaction and rapport created with librarians. Both Mellon (1986) and Mosley (1997) recommend the use of introductory tours as anxiety reducers instead of trying to load instruction sessions with heavy content. Nicknamed "warmth seminars" (Mellon, 1986, p. 164), Mellon's orientation programs specifically discussed fears and apprehension as part of the introductory tour. Pixie Mosley's (1997) article chronicles her evaluation of the guided tours offered at Texas A & M University Library in order to determine if they should be discontinued. The tours were neither required nor related to any specific course, yet 93% of the participants reported they felt more comfortable about using the library after the tour, and 96% believed they learned useful information. Very favorable remarks about the tour leaders support the idea that human interaction is significant, especially for international students, and successful relationships with library staff are critical in making international students more comfortable and in orienting them to fundamental differences between their home countries' and American libraries.

A discussion of change as a source of library anxiety is useful particularly since library technology changes so often that everyone, including librarians, is constantly re-experiencing the cycle of adjustment, interaction, and internalization in lifelong information literacy learning (Nahl, 1997). Preparing students for library use before research begins will also alleviate anxiety, according to Cope and Black (1985). Since collaborative learning tends to diffuse the fear of an individual appearing ignorant, Bradley and Russell (1997) contend that small-group instruction is particularly helpful for international students. Hands-on instruction in small groups encourages class camaraderie and alleviates the "others know; I don't" feelings (Collins et al., 1987, p. 80; Jiao & Onwuegbuzie, 1998; Z. Liu, 1993; Mark & Jacobson, 1995; Onwuegbuzie & Jiao, 1998).

Researchers advise librarians to present a realistic model of research by not producing a demonstration in which all search strategies work the first time (Clark & Kalin, 1996; Mark & Jacobson, 1995; Nahl, 1997; Vidmar, 1998). Perfect presentations imply that searching is easy and result in aggravation when students later try the searching on their own and are not as successful as the librarian. Keefer (1993) believes watching the librarian model the same procedure of making mistakes or poor choices, and then succeeding through problem-solving and revision of search strategies will ease anxiety once the student faces problems in actual searching situations. She encourages instructors to discuss these threats to self-esteem and to teach students to be "fishers", who search for resources as if they are casting a fishing line; then, when encountering barriers or no results, they cast in a wider area, try different locations/synonyms, yet are persistent and conscious of other possibilities.

Computer Anxiety

In addition to facing library anxiety, many students, and particularly international students, may suffer from computer anxiety. Despite the fact that computers are virtually omnipresent in general life and one would deduce that students now entering a university would be familiar with computers, "techno phobia now afflicts one-third of college students. . . . and the numbers have never been higher" (Gos, 1996, ¶ 1). Although in many ways computers have made library tasks more efficient and less time consuming, D. King and Baker (1987) insist that technology has added to the complexity of library research. Like library anxiety, nervousness about computer use actually influences the degree to which the technology can be effectively used (Marcoulides & Wang, 1990). Three aspects of computer anxiety detected in Bradley and Russell's (1997) study are: (a) damage anxiety: fear of breaking equipment or losing information; (b) task anxiety: fear of not understanding computer jargon, of getting stuck, or of not knowing where to start; and (c) social anxiety: fear of appearing ignorant to those who are watching.

Most recent studies confirm that traditional variables prove to have little or no correlation with computer anxiety, including (a) age (Bradley & Russell, 1997; Rosen, Sears, & Weil, 1993; Todman & Lawrenson, 1992); (b) gender (Ayersman & Reed, 1995/96; Bradley & Russell, 1997; Brosnan & Davidson, 1994; Marcoulides & Wang, 1990; Todman & Lawrenson, 1992); (c) number of years of education (Marcoulides, Mayes, & Wiseman, 1995); (d) learning style (Ayersman & Reed, 1995/96); and (e) computer knowledge (Gos, 1996) or number of computer classes previously taken (Bradley & Russell, 1997). Marcoulides and Wang (1990) compared university students

in China and the United States and concluded nationality or ethnicity is not correlated with computer anxiety.

Early literature reported that experience with computers lowered anxiety, but later studies clarify that experience itself does not lower computer anxiety; indeed bad experiences escalate anxiety (Gos, 1996). Gos discovered that university students without any computer experience were also without computer anxiety, and every subject who exhibited computer anxiety had computer experience (¶ 38). It is the quality of the instruction or the computer experience that is the key factor in the user's level of concern (Ayersman & Reed, 1995/96; Bradley & Russell, 1997; Gos, 1996; Marcoulides & Wang, 1990). Todman and Lawrenson (1992) conducted an experiment matching nine-year-old students and university students of comparable intelligence, as measured by scores on a non-verbal reasoning test. The primary students exhibited lower anxiety about using computers. The important variable was not prior experience with computers, but prior success with computers. The authors propose that children have relaxed, stressless computer experiences of game playing, art work, or simple word processing that leads to their lack of computer anxiety, and the authors counsel that instructors must provide computer experiences that will produce success and foster self-confidence. Because of the nature of libraries in today's technological society, instruction librarians are faced with not only library anxiety, but also the added complication of computer anxiety. Computers do not solve the problem of library anxiety for students; rather, they introduce new sources of frustration, and especially for the novice, conducting research using computers is increasingly more stressful (Egan, 1992, ¶ 7; Kissane & Mollner, 1993). As with library anxiety, the source of computer anxiety is usually the fear of failure, and the

articles cited indicate that the only significant variable in computer anxiety is the lack of success in prior computer experiences.

Low anxiety does not guarantee mastery of research skills or increased knowledge of the subject. Marcoulides and Wang (1990) stress that instruction and practice, guided by the librarian, is more likely to lead to a successful experience and more likely to reduce potential anxiety than individual random experimentation. Although active learning sessions involving hands-on opportunities decrease the time that librarians can lecture or demonstrate, evaluations and student journals illustrate that active learning opportunities result in better understanding of concepts and more successful experiences than lecture and demonstration-only formats (Mark & Jacobson, 1995).

The Relationship Between Information Literacy and Academic Achievement

Onwuegbuzie and Jiao's (1998) empirical research on library anxiety was done in conjunction with a graduate psychology class instructor who indicated, "Students who are anxious about seeking help from a librarian tend to produce a research proposal of lower quality" (p. 236). A collaboration between an undergraduate English Composition faculty member and librarian Zahner (1993) compared the focused topics and bibliographies produced by two groups who received information literacy instruction. One group was taught in a lecture/demonstration style that focused on the library's search tools. The other group examined the process of research and the cognitive strategies used. Although there was no difference in student perception of the usefulness of the instruction, the process/strategies group exhibited lower library anxiety. The classroom faculty member who analyzed the final product papers substantiated that the process/strategies-group topics were both more interesting and focused and that the resulting bibliographies were

of higher quality than those from the group whose instruction focused on tools rather than strategies.

Students' reluctance to show their ignorance of library skills and their lack of actual library use leads their professors to overestimate their skills and thus not provide instruction in research strategies (Jiao & Onwuegbuzie, 1995). Wakiji and Thomas (1997) surveyed undergraduate students about how they learned library and research skills. The teachers polled believed that the primary way students learn to use the library is on their own and the least likely way is through their teachers. The students, in contrast, alleged that teachers are the most likely way they learn library skills. It is therefore not surprising that 52.5% of faculty members felt they could not spare time in their curriculum for any library instruction, whether taught by the teacher or by a librarian; yet 74.5% of the faculty were dissatisfied with their students' research abilities and the ultimate products. Even faculty who do solicit help from librarians may fail to understand the wide variety of information librarians need to teach in order for students to learn and experience success in research. "All within the fifty-minute hour, which seems to be how long professors feel it should take their students to master library resources," Mellon muses (1989, p. 77).

Davis and Cohen (2001) analyzed bibliographies from undergraduate research papers written at their institution from 1996 to 1999. In the three years, they noted a marked increase in the use of web sites as resources listed in the bibliographies and a decrease in the citation of books and journals, even in their online formats. Without strict guidelines from faculty about which types of resources are appropriate for scholarly work, Davis and Cohen fear that students remain unmotivated to practice any critical

thinking and simply rely on Internet search engines as preferred sources of locating information. In Davis's (2002) update of the original analysis, he notes the continuing decrease in the inclusion of books in bibliographies; in fact, often the only book cited was the class text. A small increase in the inclusion of magazines, as opposed to journals, and the use of newspapers was observed. Although the addition of web sites did not change significantly, the type of web sites cited did: a large increase in the use of .com web sites was detected compared to a decrease in the use of .edu, .gov, and .org web sites. Again, Davis maintains that instructors must be more prescriptive in their assignment expectations if they desire students to improve their academic research. He insists that if librarians want to have any impact on the quality of student research, it must take the form of collaborating with faculty concerning the guidelines for research assignments. Mark and Jacobson (1995) recommend that teachers ask students to submit abstracts and citations that highlight the elements that would be useful for proposed topics. Without this sort of tracking, they contend, it is unlikely that students will use critical thinking and evaluation skills even if they are taught, and will instead conduct ineffective searches and then simply take the first ten results and "print and run" (p. 31).

University faculty consider information literacy as important, but feel that they themselves need more instruction and therefore prefer that the librarians teach the information literacy sessions to students (Fullerton and Leckie, 2002). However, faculty as a whole do not support the collaboration of teacher and librarian in terms of team-created assignments, team-taught courses or sessions, or team grading. Because of students with increasingly weak academic skills and a decrease of individual contact with faculty, Blandy and Libutti (1995) claim that librarians must take on the role of coach and

guide through the information gathering and processing stages of research. Factors such as library anxiety, computer anxiety, and the relationship between information literacy and academic achievement underline the importance of information literacy instruction for all students, especially for those from other countries who are studying in United States universities.

CHAPTER 3

CHALLENGES INTERNATIONAL STUDENTS FACE

In some ways, international students face the same challenges of library anxiety, computer anxiety, and lack of instruction or experience with libraries that American-educated students do. However, there are some added complications that must be acknowledged and addressed when librarians teach information literacy skills to international students. Differences in education systems, libraries, and language structures frequently cause barriers to effectively using American university libraries.

Education Differences

Recognizing the importance of culture in how individuals categorize information, Mestenhauser (1998) offers the reminder that ideas about what constitutes critical thinking, creative thinking, and cognitive flexibility are culturally defined. Information can be categorized in numerous ways, and Pick (1998) speculates about how a society's values and practices influence an individual's cognitive processes. National curriculums offer diverse experience with certain types of information management—for example, the scientific method, logical arguments of evidence, or quantitative research—and in the use of and attitudes toward technology (Kaplan, 1983). Variations such as these contribute to difficulties faced by international students not only in the traditional classroom but also in library instruction classrooms and in patterns of library use.

The American education system, from preschool through graduate school, is "highly participatory," according to Frances Jacobson (1988, p. 629), with an emphasis on interaction between the student and the teacher. This differs from many other education systems throughout the world where the student's role is more observational or imitative. One hurdle to overcome is the difference in the nature of the roles of the student and the teacher. In many countries, the transmission of cultural heritage is a major objective (Peck, 1992), and the teacher is seen as the sole authority (Bilal, 1990). It may be inappropriate to argue with or question the professor, thus fostering a more formal relationship between student and teacher that excludes a discussion of feelings or opinions (Emigh, 1991). M. Liu (1995) asserts that non-Westerners have learned a different mindset, which assumes that students do not ask questions, do not challenge, and do not judge what they hear or read. Nevertheless, Fu (1995) points out that being quiet is not the same as being passive or reserved. Coming to an American university that focuses on independent learning and an active, questioning style of education presents an immense problem for many international students.

Since many educational systems throughout the world consider the instructor to be the disseminator of information and the student's role as note-taker or memorizer, another obstacle for international students may be the transition to independent gathering of information through the library, along with the need to create a strategy of priorities when sifting through resource options. Working with Chinese international students, McClure (2001) encountered difficulties on the part of the students with the concept of research as a personal responsibility rather than as part of a more hierarchical team approach.

Sally Wayman (1984) speculates a society's child-rearing practices influence learning styles. American parents, for example, usually teach children with verbal exchange: "Tell me how old you are"; "What color is this?"; "Where is the elephant?" Other cultures may employ more observation and imitation in teaching their children; therefore, the role of silence and reception plays an alternate role in these societies in general and consequently in their classrooms (Jordan, 1997; Preston, 1992). Fu (1995), as an example, explains that Chinese parents tell children not to speak unless they are completely sure they are using the correct expression.

Some societies are written-language dependent while others are spoken-language dependent, so international students come to the United States with sundry histories in relationship to the importance of, and reliance on, the written or spoken word. Students demonstrate that culture impacts all facets of learning, even how individuals view evidence, truth, or information itself (Kaplan, 1983). Cope and Black (1985) explain that in locales with limited financial resources, a single textbook may serve the entire classroom, and thus instruction is often based on memorization and recitation. Education in these cultures is more rigid, dependent on the teacher as the main source of information and lecture as the principal method of teaching (Greenfield et al., 1986; Macdonald & Sarkodie-Mensah, 1988). Because they are often accustomed to learning by listening to the teacher, many international students find it awkward to participate in class discussions in an American classroom. In speaking of the assessment of Asian students, Fradd and McGee (1994) argue that because Asian students learn by observation and memorization, rote learning in itself is considered studying, and rote learning is not only used but also preferred over discovery learning.

Even information seeking is culturally contextualized (M. Liu, 1995). She advises that "communication/conversation apprehension" (p. 125) is not always the result of actual or even perceived poor English skills, but may simply be a cultural or individual reticence to talk. M. Liu highlights the importance of social networks in education and describes how cultures seek information in different ways. Non-native English-speaking Latinos, she alleges, typically utilize a gatekeeper such as a relative or friend, who solves problems and facilitates access. In contrast, Asians are more likely to use informal social networks such as community newspapers or ethnic organizations. International students will typically go to peers rather than authorities for information (F. Jacobson, 1988).

Moeckel and Presnell (1995) infer that the major difference between American education and non-Western education can be described by the phrase *critical thinking*. Cultures which stress textbook learning often use restatement to show mastery of a topic, while in the United States, going beyond reporting information to draw conclusions is necessary. The American emphasis on synthesis and analysis presents a particular stumbling block for many other-culture learners (Jordan, 1997), and in cultures where the professor is viewed as the transmitter of knowledge, the teacher rather than the student performs the critical thinking process of choosing and judging information (F. Jacobson, 1988). Sternberg and Spear-Swerling's (1996) articulation of triarchic thinking, which includes analytical/critical thinking, creative/synthetic thinking, and practical thinking, illustrates that although analytical thinking may be sufficient for work in American secondary schools, in an American college setting, creative thinking is needed so that international students must analyze and generate ideas, not just repeat them. Some societies consider primary and secondary education as the time for work and hard lessons

and college as the time to form social connections that will be important in the rest of life (Moorhead, 1986). Given that viewpoint, classroom learning and library use may not be a high priority for certain international students.

One additional adjustment that international students often face in the American education system is the notion of intellectual property and plagiarism. Outlooks about copyright and plagiarism differ with the way that cultures look at language and information property. L. Thompson and Williams (1996) concede that plagiarism can be the result of lack of self-confidence in a writer's English skills, leading to dependence on an original source's phrasing. However, what an American instructor might consider plagiarism may instead be the result of an international student's belief that language, ideas, and writing are shared by the entire culture and are not the sole property of an individual author. ESL teacher Deckert (1993) feels the insecurity that international students feel about their English abilities leads them to fall back on the habit of giving back information as they hear it or find it, making them "recyclers" (p. 13). Many societies consider use of another's ideas as a respectful compliment instead of an infringement of copyright. Understanding how to integrate others' findings into their own writing style poses a difficult mindset shift for international students who are expected to conform to Western notions of copyright and plagiarism (Greenfield, 1989).

In addition to alternative philosophical underpinnings of national education systems, worldwide school systems vary widely in their practical operations. Financial assets certainly play a paramount role in the types of facilities and resources available and in the educational backgrounds of the faculty and librarians. The level of control of the curriculum and teacher education programs; and the certification by national, regional, or

local governments also contribute to the way each country's educational system functions. According to Peck (1992), the importance of national-level exams necessary for advancing to the next step in the educational system may necessitate an emphasis on memorization and the transmission of teacher-chosen knowledge. Classroom-conduct values differ among cultures—ideas about talking and listening in the classroom, attendance and punctuality, and the concept of helping others versus cheating. Many cultures employ a grading system that is solely dependent on annual exams so that an American grading system, which includes many assignments throughout the semester, and which can incorporate class participation and/or attendance, presents an especially difficult challenge for international students (Wayman, 1984).

Library Differences

Just as national education systems and values differ throughout the world, so do libraries. International students face various barriers as they attempt to understand and efficiently use the American university library. Some of these obstacles are the same ones that native English speakers face: initial fears of not knowing where to go, what to do, or how to use equipment, and/or a hopelessness in the face of a mountain of resources (Li, 1998; M. Liu, 1995). Even though to some degree all students face the same difficulties in their use of the university library, many of the hurdles that are common for all users are inflated or compounded for second-language learners.

Jiao and Onwuegbuzie (1999) point out that although NNSE students may visit libraries more than their native-English-speaking counterparts, they use them less. One of the chief impediments for international students in the university library is that there are major differences between how libraries work in their home countries and how they work

on an American university campus. It is important to clarify that some international students may be familiar or comfortable with libraries in their home country and only need a transfer of their skills into an American setting. Others, unfamiliar with libraries in general, may need complete instruction in the culture and use of libraries (DiMartino & Zoe, 2000; Jordan, 1997).

Some libraries throughout the world use classification systems other than Dewey Decimal Classification System or Library of Congress Classification System, which may introduce a complication for international students as they locate and retrieve materials in American libraries (Ball & Mahony, 1987; DiMartino & Zoe, 2000; Hoffman & Popa, 1986; M. Liu, 1995; Z. Liu, 1993; Moeckel & Presnell, 1995; Preston, 1992; Rutgers University Libraries, 1998). Retrieving materials in itself may prove a barrier. Many other-culture libraries do not allow patrons to browse or gather their own materials, instead requiring a mediator to locate and collect materials for the student. Libraries may be more of a textbook repository or a study hall than a place for independent research (Ball & Mahony, 1987; DiMartino & Zoe, 2000; F. Jacobson, 1988; M. Liu, 1995; Z. Liu, 1993; Moeckel & Presnell, 1995). In libraries where resources are scarce, student use of materials may be restricted in order to prevent damage or loss (Macdonald & Sarkodie-Mensah, 1988). Their home libraries may have a non-circulating collection, which makes the idea of borrower responsibility a new concept, and international students may even be unfamiliar with the idea that loaned materials must be returned to the library without the library contacting the student to ask for them back (Wayman, 1984). Nevertheless, libraries in other cultures are changing. Despite the fact that most researchers cite closed stacks, non-circulating collections, and direct use of technology as

unfamiliar aspects of American libraries, Allen's (1993) survey of the use of libraries by international students at the University of Illinois indicated that only 12% of the respondents found open stacks a new concept and only 22% reported self-service machines such as photocopiers were unfamiliar. It is worthwhile to note that 92% of the respondents in Allen's case study were graduate students, and they may have had more opportunities to use a variety of libraries in their home countries than undergraduate international students without college experience previous to their American education.

American libraries typically provide end-user services, in which individuals can directly access resources and perform their own searching, unlike many libraries throughout the world that provide only mediated services. Accustomed to a passive role in which someone else executes requested searches, international students may view the American library staff as "universal aunts" (Jordan, 1997, p. 213; Wayman, 1984) who they expect will individually shepherd them through all procedures and essentially do research for them. Additionally, NNSE (Non-Native Speakers of English) may be unaware of services such as Reference Desk help, interlibrary loan, and other options unavailable in their home country libraries (Ball & Mahony, 1987; DiMartino & Zoe, 2000; Greenfield, 1989; F. Jacobson, 1988; Jiao & Onwuegbuzie, 1999; Jordan, 1997; Kamhi-Stein & Stein, 1999; Keefer, 1993; M. Liu, 1995; M. Liu & Redfern, 1997; Z. Liu, 1993; Moeckel & Presnell, 1995; Novak & Robinson, 1998; Wayman, 1984). For those from societies where status or age plays an important role, international students may expect that their status or age will permit rules to be bent or certain favors to be granted (Curtis, 2000). If they come from a country where librarians are simply clerks to

bring requested materials, international students may view librarians as nonprofessionals and take a patronizing attitude toward them (F. Jacobson, 1988; Peck, 1992).

In cultures that are not book-oriented, libraries are not seen as important for research, thus international students may be unfamiliar with the norms for library behavior (Bilal, 1990). Ball and Mahony (1987), DiMartino and Zoe (2000), K. Downing et al. (1993), Macdonald and Sarkodie-Mensah (1988), and Preston (1992) all stress that the overwhelming glut of resources in American libraries may be even more daunting for international students than it is for Americans. Standard American resources such as indexes may even be unfamiliar to international students who come from areas where financial and political support for libraries is scarce, and their home libraries may be unable to purchase up-to-date tools, especially those that employ technology.

International students are often computer literate and computer savvy. Data collected from over 100,000 worldwide students applying to American universities revealed that 69.1% of the respondents used a computer for any purpose once or more a week, and 42.5% used the Internet once or more a week (Taylor, Jamieson, & Eignor, 2000, p. 580). However, despite the fact that many international students are experienced computer users, technology is still not a common phenomenon in libraries throughout the world, so that many international students have little experience with computers in libraries and do not feel prepared to use American libraries (Allen, 1993, p. 330). Allen surveyed 750 international graduate students at the University of Illinois, asking, "What was new to you?" in American libraries. Although 85% of the respondents indicated they had used computers before, 69% had never previously used any type of computer in a library. Of those surveyed, 51% had never used an online library catalog, and 61% had no

experience with databases. Using library-specific technology such as online catalogs, electronic databases, microform reader/printers, and self-service photocopiers ranked as the greatest anxiety-producer in all of the studies cited in this thesis with both native English and NNSE students. It is therefore not surprising that inexperience with the technological resources of an American university library creates problems for international students adjusting to a new library culture or perhaps libraries in general.

Language Differences

Culture plays an important part in communication, especially in nonverbal communication. In some societies, eye contact between certain individuals is considered impolite; nodding may signal understanding, but it may also be simple acknowledgement or an indication of respect for the teacher or the information. Mistakes can cause great shame in some cultures, while in other societies, trial and error may be an acceptable way of learning. Even the concept of tact or openness is culturally defined (Moeckel & Presnell, 1995). DeSouza (1996) counsels librarians to keep in mind that although international students may have values and customs that are foreign to Americans, international students are not all the same, nor are all Asian international students the same, nor are all Korean international students the same. While it is impossible to know or recognize all the nuances of a particular culture, understanding that cultural variations exist is a far-reaching step in communicating with those from outside the United States.

In 1995, 24,000 of the freshmen entering the California State University system reported English was their second language; yet only 1,000 of these non-native speakers of English tested proficient in college-level English (Kahmi-Stein & Stein, 1999, ¶ 1). Numbers such as these make it evident that it is crucial for instruction librarians to

acknowledge the challenges that language can present. Clearly use of English is a key complicating factor in international students' use of an American university library. As noted previously, one major source of library anxiety is the fear of revealing ignorance (Mellon, 1989). This fear is compounded for the international student who is not only worried about revealing ignorance of the library, but who also fears revealing inadequacies in communicating in English. Native speakers of English themselves often have trouble distinguishing library terminology such as *reserves* and *reference*, *bibliography* and *biography* (Preston, 1992), and A. Downing and Klein (2001) underscore that the problem is more difficult for the L2 (second language) student to whom "library-related terminology is a third language" (Kamhi-Stein & Stein, 1999, ¶ 5).

Language difficulties impact not only information-gathering skills but also help-seeking behaviors. Lack of proficiency in English can be a major concern for international students in their library use as it relates to asking for and receiving assistance. Natowitz (1995) conjectures that if students are self-conscious about their English skills, they may avoid the library to avoid asking questions. Because of varying values related to information-seeking behavior, international students may cloud the issue of what question they really want answered in an effort to seem less needy than they really are. Often the clarifying questions that library staff ask, hoping to determine the real need, are interpreted by the international student as intrusive or judgmental. For those who are from a culture concerned about accommodating others, a question such as, "Are you looking for maps or statistics?" poses a dilemma. While American students would not feel constrained to choose one of the options, international students, out of respect for authority, may feel obliged to accept one of the proffered choices when in

actuality they want neither (deSouza, 1996). Research showed that English expertise was the major factor in how successfully NNSE, including both international students and residents, used university libraries, specifically as it contributed to the frequency of asking for help and receiving instruction (M. Liu & Redfern, 1997). Respondents in the study revealed a compound fear of asking for help at the Reference Desk—fear that their questions would not be understood and/or fear that they would not understand the answers given to their questions. In an analysis of the variables tracked in their survey, M. Liu and Redfern documented that only individuals who had spent 15 or more years in the United States rated themselves as confident in asking questions and as successful in using American libraries. Since international students are typically in the United States for only for a limited time while they study, there is little likelihood they will reach that 15-year comfort zone that United States' residents reported in M. Liu and Redfern's research.

In addition to the challenge that language creates in help-seeking behavior, language structure itself can cause problems in search strategies. F. Jacobson (1988) observes that library terminology is often hierarchical with a skewed syntax. For example, instead of searching for *Chinese culture* in a catalog or database, controlled-subject searching, as dictated by the Library of Congress, requires the format *China–Social life and customs*. For international students, concerned with proper sentence structure and precise vocabulary, this alteration of words and positions can be much more baffling than it is to native English speakers. The use of synonyms, a necessity in keyword searching, is a difficult skill to master, especially for students with limited English vocabulary (F. Jacobson, 1988). DiMartino and Zoe (2000) explain that NNSE

often have more formal written and spoken English skills than Americans tend to use, and vocabulary is the biggest impediment to L2 (second language) students in effective searching.

Leki and Carson (1997) discuss the complaints of NNSE students that writing assignments in ESL classes often focus on using a text as a springboard, highlighting sentence structure and correct speech patterns. Students interviewed by Leki and Carson confided that this emphasis poorly prepares them for the type of writing needed in mainstream college classes. A stress on correct structure of the English language can also impede international students in search strategies. Efficient searching in online databases depends on the use of truncation, Boolean operators, proximity searching, the use of synonyms, and phrase searching, all of which may be complicated by the structure of the student's native language. Research at Baruch College with both native English speakers and non-native speakers of English substantiated that all students had trouble with the above search concepts, but that NNSE had more problems, especially East Asians, and specifically Chinese-speaking students (DiMartino & Zoe, 2000, p. 20). If international students are still mentally translating languages as they listen and think, the linguistic patterns of their native language may interfere with their ability to construct effective search statements in English. Some languages do not distinguish between singulars and plurals, which affects the ability of second-language learners to fully understand the concept of truncation. For example, Chinese dialects do not use plurals, nor do they use connectors such as *and*, so truncation and Boolean searching are especially difficult concepts to grasp for Chinese-speaking students.

The international student faces a plethora of problems when arriving at an American university. In addition to cross-cultural adjustment, many international students also are impeded by contrasts in education systems, different library cultures, and difficulties with language. Wan, Chapman, and Biggs (1992) recommend that since institutions cannot eliminate the stressors international students face, faculty must teach them effective ways to cope with their stress. By being cognizant of the special challenges faced by international students in respect to using an American university library, library staff can purposely identify potential causes of concern and make concerted efforts to alleviate the difficulties of international students.

CHAPTER 4

INTERNATIONAL STUDENTS AS LEARNERS

People are complex and not one-dimensional. Because the "brain is a pattern-seeking device" (Christison, 1999a, ¶ 17), individuals are often categorized to facilitate daily routines and organization of social roles. While it is obvious that a person has multiple labels (for example, female, librarian, Californian), in certain situations, some labels take precedence and may develop into stereotypes. Brown (2000) cautions that international students are not a "monolithic group," but the university community often compartmentalizes international students as if that were their only characteristic. International students are more intricate than simply originating from another country or being a non-native speaker of English. In a university setting, an international student is an adult learner and must be treated and taught as one.

International Students As Adult Learners

Although international students face the special challenges caused by education differences, library differences, and language differences, they are adults, just like other college learners. The fact that they are adult learners—even if they are *not-quite* adults, the traditional-age college undergraduates—indicates that librarians need to assess how the principles of adult learning relate to teaching information literacy skills to international students.

Portrait of Adult Learners

Many educators, following the lead of Malcolm Knowles (1970, 1990), embrace the concept of andragogy, distinguishing children as "compulsory learners" from adults who are "volunteers in learning" (1970, p. 79). Though theories vary, several common themes emerge when painting a portrait of the adult learner: self-directed; experience-based and relevance-oriented; and seeking autonomous learning through active participation. Variables such as age, ethnicity, gender, socioeconomic background, and personality preclude the construction of a one-fits-all description of an adult learner. However, the maturity which a variety of life experiences and the input that career and family obligations brings to an adult learner typically leads to the desire for self-direction and active participation in one's own learning (Donaldson, 1999). In a survey of library service quality, the same desire for self-reliance and self-control existed for both undergraduate and graduate students (Cook & Heath, 2001). This need for self-reliance is echoed throughout the literature on adult learning as particularly important in teaching adults (Brookfield, 1994; Donaldson, 1999; Fidishun, 2000; Galbraith, 1990; Knowles, 1970, 1990; Meyers & Jones, 1993; Moran, 1991; Smith & Pourchot, 1998; Stephens, 1994; Vella, 2000). Brookfield (1994), however, believes culture and society are more crucial influences in learning than is age. He says "self-directed" can actually be a matter of being self-contained or self-obsessed.

Another often cited characteristic of adult learners is their rich base of experience and their desire for immediate relevance and application in their work. Stephens (1994) points out that although experiences do enrich the learning environment for adults, they can also hinder learning by producing emotional connections to negative memories or

preventing them from being open to new ideas. As Knowles (1970, 1990) observes, relevance to present conditions of work or anticipated relevance to future goals is viewed by the adult learner as a necessary aspect of education. Graduate international students most likely have past work experience in their home countries, and they often come to the United States with the specific goal of using their American education upon their return home. Pinheiro (2001) interviewed nine Ph.D. international students about their positive and negative experiences in studying in the United States. The interviews were specifically structured to correspond to Knowles' (1970, 1990) concept of andragogy. Answers about negative experiences centered around instances where courses did not allow international students to choose readings or customize their research to focus on what would be relevant to roles in their home countries. Although visa status prevents them from working outside the college campus, many international students are heavily involved in religious or community activities, often in positions related to career goals or past experience. In these cases, students expect learning to enhance present roles as well as future roles.

The Not-Quite Adult Learner

Although traditional-age college students may no longer be children, they are not yet, according to Perry (1998), adult learners. Perry's stages of cognitive development detail how learners advance from concrete to more abstract thinking skills, and he describes cognitive changes as learners progress from reliance on the instructor and reception of information to a more advanced stage in which the learner begins to contribute ideas and opinions to enable a cooperative relationship with the instructor and knowledge. In his extensive 1960s research, which was later updated in the mid 1990s to

broaden the original sample, Perry concluded that most American college freshmen and sophomores are unable to move beyond the dualism stage. In this stage, students view themselves as receivers of knowledge, under obligation to demonstrate they have learned the right answer; instructors are seen as givers of knowledge because of their authority. Knowledge, at this stage, is seen as a collection of information, and right and wrong answers exist for everything. Moran (1991) characterizes accepting uncertainty as a unique factor in adult learners and asserts, "The essential quality of mature thinking is exercising judgment in dealing with tasks that involve multiple variables and have no universally accepted solutions" (¶ 12).

Writings about the differences between generations are legion, but one distinction is often mentioned—computer literacy (Flory & Miller, 2000, p. 5). Many educators describe the impact of technology and media on learning and teaching styles and the pace of information processing (Ricigliano, 2001; Roth, 1999), reducing learning to bite-sized pieces and making learning less linear. Equally as important as the influence of the fast pace of technology is its pre-packaged passivity. In a course evaluation, one of Sacks' (1996) students complained, "Higher education doesn't work any more. We [students] think the media is more substantial than you the teacher. Machines are easier. The media is passive, safer. It doesn't really affect us. But a teacher, it's real, it's close" (p. 145).

The constantly changing pace of technology-driven learning has also produced learners who are capable of multitasking. Outlining the learning style preferences and characteristics of Generation Y, Faust, Ginno, Laherty, and Manuel (2001) call not-quite adults the "headphone-wearing, itchy mouse-fingered, and frequently paged". They contend that Nexters are holistic learners, play-oriented, expecting teachers to provide the

learning, but expecting that learning to be graphic, visual, active, and customizable. Lori Roth (1999) explains that more nonlinear, nonsequential modes of perceiving, thinking, and investigating have resulted from the visual means of communication that has become our "unifying cultural force" (¶ 7). Like the adult learner, the not-quite adult begins to desire more immediate or perceived relevance than the child learner. Journalist-turned-college-lecturer Peter Sacks (1996) insists pragmatism has taken over Generation X so that they ask not, "Is it true?" but rather, "What use is it?". This "What's in it for me?" mentality makes the promotion of the relevance of library instruction especially vital for the not-quite adult (Warnken & Young, 1991).

The International Adult and Not-Quite Adult Learner

As adults and not-quite adults, international students desire self-reliance, relevance, and participation in the decisions about their own learning. Librarian instructors must squelch the inclination to treat NNSE learners as they would children, simply because of their language difficulties. The educator's role, declares Fenwick (2000), is to facilitate participation in the meaning of an individual's education, not to concentrate on the personal development of the individual. Pinheiro's (2001) work uncovered negative attitudes about faculty who did not acknowledge the educational backgrounds and professional experience of the Ph.D. international students and "'treated us as empty slates'" (p. 9). On the other hand, international students who are not-quite adults may still be in Perry's (1998) dualist stage, relying on the instructor for guidance. This guidance, according to McNeer (1991), is especially important in group work where desired self-reliance and participation in one's own learning can be developed in non-threatening ways.

It is vital to remember that almost all of the students presently in college—including international students, whether undergraduate or graduate—are part of the X and Y generations. The impact of technology is not limited to the United States, or even to high-technology societies. Television, radio, music technologies, and computers have extended throughout the world to transform the face of society, education, and communication. The passivity and fast pace of technological information has gripped individuals worldwide. Taylor et al. (2000) administered surveys to over 100,000 students taking the Test Of English As a Foreign Language (TOEFL). A passing score in this test is generally required for admission to universities in the United States. Questionnaires were given to individuals, who were ages 20-30 and evenly distributed as to gender, in their home countries (including Africa, Asia, Europe, Latin America, Near East, Pacific Islands, and United States/Canada). Overall, 69.1% of the respondents indicated they used a computer once or more a week; 42.5% used the Internet once or more a week (p. 580). Latin America ranked highest in computer use in general, and Africa revealed the lowest use. Despite these regional variations, it is clear that though experience with computers is uneven, most international students come to the United States accustomed to the impact of technology. Obviously the same admonitions about instructors addressing the needs of the "headphone-wearing, itchy mouse-fingered, and frequently paged" (Faust et al., 2001) also apply to international students.

It is equally important to recognize that other nations' education systems may be based on values that deviate from American educational values; however, though different, those values must not be discounted as inferior. Most of the cited observations and characterizations about adult learners and Generations X and Y come from North

American educators and research conducted in North American settings. Adult and not-quite adult learners from countries other than the United States do not necessarily conform to these generalizations. Perry's (1998) dualist stage, relying on the teacher as the disseminator of knowledge, may be more the result of a cultural value of respect than of a cognitive stage of development. On the other hand, older adult international students may still be operating cognitively as dualists because of their past inexperience with critical reflection techniques or lack of opportunities for input and interaction with faculty.

Stephen Brookfield (1994), like many others, concentrates on the role of culture in shaping learning. In low-context, individualistic societies such as the United States, individual participation is not only desired in education, but it is also required. In high-context, collectivistic societies, however, participation by individuals outside the group setting may not be valued in academic venues. The way in which adult learners want active participation to take place in their learning varies considerably depending on the culture. Describing growing up in China, Fu (1995) reports she was taught that conformity to the group is honored over individual uniqueness. Storti (1999) offers cross-cultural workshops throughout the world, and in each workshop he asks participants to rate themselves and their country on various traits. His graphs show generalizations culled from these self-ratings. The United States ranks lowest in context; that is, it is the most individualistic. There is then a huge gap between it and any other country, with France coming closest and Japan at the opposite extreme (pp. 98-99). It is essential for American librarians to remember that although international students are adults and

desire participation in their own learning, American culture in general and American educational culture in particular is very foreign to the rest of the world.

International Students and Learning Styles

Students' experiences in their education systems affect their learning styles and their preferred ways of learning. One aspect of American education presents an especially significant change for international students as they come to study in American universities—the use active participation and group or cooperative learning. Research shows that these are important components of American education, but they tend to be unfamiliar, and therefore uncomfortable, for international students.

Active Learning

In the 1950s and 1960s, Ohio State University educator Edgar Dale conducted a series of studies on the effectiveness of various teaching methods. He designed the Cone of Experience (1954, p. 43), which visually depicts the narrowing effectiveness of learning experiences such as direct p rposeful experiences; contrived experiences; dramatized experiences; demonstrations; study trips; exhibits; educational television; motion pictures; recordings, radio, or still pictures; visual symbols; and finally verbal symbols. Dale maintains that the learning experiences at the higher part of the cone—verbal and visual symbols—are least effective and only with the most abstract concepts. Similar research, conducted in the early 1960s at the National Training Laboratories in Bethel, Maine, produced The Learning Pyramid (see Figure 1), which summarizes the retention rates for various learning methods. Although the source and original data

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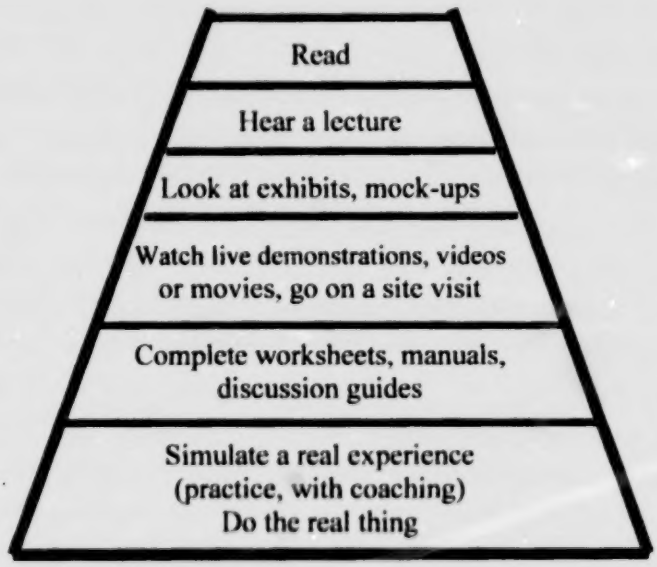
PEOPLE GENERALLY REMEMBER

An important learning principle, supported by extensive research, is that people learn best when they are actively involved in the learning process. The "lower down the cone" you go, the more you learn and retain.


10% of what they READ
20% of what they HEAR
30% of what they SEE
50% of what they HEAR AND SEE
70% of what they SAY or WRITE
90% of what they SAY AS THEY DO AN ACTIVITY
Read
Hear a lecture
Look at exhibits, mock-ups
Watch live demonstrations, videos or movies, go on a site visit
Complete worksheets, manuals, discussion guides
Simulate a real experience (practice, with coaching) Do the real thing

Adapted from Audio-Visual Methods in Teaching, Edgar Dale Dryden Press, N. Y. 1954. p. 43.

Figure 1. The Learning Pyramid: Retention rates of information learned by various passive and active learning methods. Note: From *The Learning Pyramid*, NTL Institute for Applied Behavioral Science, n.d. Reprinted with permission.

cannot be verified[1], The Learning Pyramid is still widely cited (Ricigliano, 2001; Sousa, 2001) and used. Compared to 10% retention of reading and 20% of hearing, The Learning Pyramid (see Figure 1) illustrates that 70% of what is learned when engaged in group discussion and 90% of what is practiced with coaching is retained (NTL Institute for Applied Behavioral Science [NTL], n.d.).

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[1]In an attempt to find the original research and information about The Learning Pyramid, I contacted the NTL Institute via e-mail. This was their response:

Thanks for your inquiry about The Learning Pyramid. Yes, it was developed and used by NTL Institute at our Bethel, Maine campus in the early sixties when we were still part of the National Education Association's Adult Education Division. Yes, we believe it to be accurate – but no, we do not any longer have – nor can we find – the original research that supports the numbers. We get many inquiries every month about this – and many, many people have searched for the original research and have come up empty handed. We know that in 1954 a similar pyramid with slightly different numbers appeared on p. 43 of a book called Audio-Visual Methods in Teaching, published by the Edgar Dale Dryden Press in New York. Yet the Learning Pyramid as such seems to have been modified and always has been attributed to NTL Institute. [They enclosed a copy of The Learning Pyramid, with permission to reproduce it in this thesis.]

American educators maintain that an important component of learning should be active participation. Best known for his groundbreaking work in experiential learning, David Kolb (1984) defines experiential learning as a multilinear process in which the transaction of the internal with the external, and the transaction of personal knowledge with social knowledge, result in cognitive development (p. 132). Many educators before and after Kolb advocate active learning as a necessary and productive method of teaching, especially with adults (Erickson & Strommer, 1991; Felder & Brent, 1996; Galbraith, 1990; Gresham, 2001; Kloss, 1994; Masek, 2000; Shoffner, Jones, & Harmon, 2000; Vella, 2000; Warnken & Young, 1991). McKeachie (1994) argues for a shift in teaching strategies from lecture and recitation to coaching and helping learners find solutions to problems, from whole-class to small-group instruction, from competition to cooperation and collaboration, and from passive to more engaged learning. Interactive learning affords the opportunity to voice opinions, to give and receive constructive feedback, and to learn to support one's own opinions. Active participation is equally viable in bibliographic instruction, according to Kirk (1999), who views the increased use of active learning in library instruction as the most important educational change in 25 years of library bibliographic instruction.

Despite educators' recommendations about the use of active learning, empirical and anecdotal evidence indicates that college learners tend to view education from a consumer's viewpoint in which they dislike active participation and expect the teacher to take charge of the learning (Beishline & Holmes, 1997; Bourner, Hughes, & Bourner, 2001). When professor Benevenuto (1999) attempted to initiate active learning methods and required participation in his American college class, undergraduates demanded that

he "get to the [expletive] board!" to write out his lecture notes so that they could copy the material he "was paid" to impart (¶ 5). In spite of this, Benevenuto insists that although they do not want to interact or participate, learners need to interact and participate. This sentiment is repeated throughout the literature (Beets & Lobingier, 2001; Reid, Vicioso, Gedeon, Takacs, & Korotkikh, 1998). Thomas and Harrell (1994) generally agree but caution that teachers must carefully weigh the potential benefits against the amount of emotional risk to the international student learner.

Some modern instructors rush to technology as the remedy to experiential and active learning. Nevertheless, technology itself is not the sole answer and faculty must "go beyond the mouse click" (Roth, 1999, ¶ 9-10) to employ more methods by which to engage students in learning. McKenzie's (2000) criticism of the use of PowerPoint™ presentations alleges they have often become the visual version of a boring lecture. Some librarians (Tricarico, Tholl, & O'Malley, 2001) support the use of online tutorials for certain elements of information literacy instruction because the self-paced, self-regulated learning coincides with the nonlinear approach that many not-quite adults employ. An analysis of online information literacy tutorials led Dewald (1999) to conclude that although they were effective, web tutorials should not be used in isolation because learners need human interaction. Dupuis (2001) agrees, insisting that online tutorials, even her institution's—TILT—arguably the most well-known and widely used library tutorial, must supplement and not replace live instruction.

Librarians face hindrances in attempts to use active learning techniques in information literacy instruction. The most formidable problem is the difficulty of incorporating active learning into a 50-minute, one-shot opportunity to impart all the

information and skills students will need. Additionally, without prior rapport with the class, librarians may find students reluctant to participate in discussions led by the librarian or cooperate in small-group exercises (Lorenzen, 2001).

Learning Style Preferences

In a model reminiscent of Perry's (1998) stages of cognitive development, David Kolb (1984) introduced his Learning Style Inventory to assess individual orientations toward learning, based on concrete experience, reflective observation, abstract conceptualization, and active experimentation. Kolb's inventory and discussions of experiential learning concentrate on the way that individuals learn best, and he speculates on the crucial role of experience in learning. Howard Gardner's (1993, 1999) revolutionary model of multiple intelligences created a new perspective on the variety of ways in which learners learn and the need for teaching styles to address that variety. He observes that in adults, multiple intelligences are less visible than in children, and they become more internalized and often translate into learning styles (1999, p. 107).

DiMartino and Zoe (2000) and Joy Reid (1998, p. xii) consider accommodation of learning style preferences paramount in teaching both non-native and native English speakers alike. Reid's Perceptual Learning Style Preference Survey (PLSP) (1998, Appendix 3) and other similar instruments were administered to secondary and tertiary students of most ethnic groups around the world. Some individual survey samples were small—between 100 and 200 participants in a single setting—but the total number of countries examined lends credence to the findings. Combined results indicate that most groups' primary learning style preferences were auditory, visual, and kinesthetic. Of the learning style options offered in the PLSP (auditory, visual, kinesthetic, tactile, group,

and individual), only the Arabic and Malay culture groups chose group learning as a preferred style, both groups listing it as a secondary preference. Group learning was the only learning style designated as a negative choice by any of the cultures. In fact, only Arabic and Malay respondents did not indicate a negative attitude toward group learning, and they did not register negative feelings toward any of the learning styles. These statistics showcase a dilemma acknowledged by other researchers and authors; that although group, cooperative, or collaborative learning is the method most often identified as contributing to the best learning, it is the style least preferred the by both teachers and students (Bourner et al., 2001; Felder & Brent, 1996; Hansen & Stephens, 2000). DiMartino and Zoe (2000) advise that it is important to take learning styles into account in library instruction, but they warn against falling into the trap of making generalizations about specific cultures or creating stereotypes.

Beishline and Holmes' (1997) study compared self-reported teaching style preferences in two university settings. The results showed no significant differences between undergraduates and graduates in their preferences. The most preferred teaching styles were (a) lecture with volunteer individual participation, and (b) lecture with group discussion. Least preferred were (a) lecture only with no interaction, and (b) student presentations. Respondents expressed the belief that fellow students were not qualified to teach, and even the graduate students maintained they wanted to learn from an expert and desired learning to be teacher-led. Students also did not want to be required to participate, even in class discussions, despite the fact that group discussions were one of their preferred styles of learning.

Studies present an interesting conflict between the fact that many university students prefer to learn by auditory and visual methods (Beishline & Holmes, 1997; Reid et al., 1998), even though research proves they retain less through these types of presentations (Dale, 1954; NTL, n.d.). Many writers are careful to point out that the lecture is not an inferior way to teach as long as it engages the learner, and Astin (1993) insists that delivery, not method or technique, is the most important factor in reaching the student. For example, an enthusiastic and well-constructed lecture may be far more engaging to learners than a disorganized group assignment in which the instructor is removed from participation or contribution. Supplementing verbal information with visual information and guided experience is necessary with those who employ right-brain learning styles. In discussing the importance of addressing right-brain learners, Gedeon (2000) and Sousa (2001) recommend the use of metaphors and mind maps as especially effective with those who have only basic knowledge of a subject or skill. G. Freeman (2001) touts the use of graphic organizers, but McKay's (1999) empirical research on their use suggests that the method produced immediate achievement in students but seldom resulted in a transfer of skills to new situations, even in those with visual and nonlinear learning styles. McKay observes that using a combination of both visual and text is most effective in both immediate achievement and future use.

Beets and Lobingier's (2001); Germain, Jacobson, and Kaczor (2000); and Sankaran, Sankaran, and Bui (2000) each conducted empirical studies comparing teaching formats and student achievement. Techniques examined included chalkboard lecture, lecture with overhead transparencies, computer-assisted teacher presentations, hands-on experiences, and web tutorials. All researchers determined that the method of

teaching did not affect academic performance in the course, but the relationship between the teaching style and the learning style preference of the individual student did influence performance. Results also indicated that student attitudes were better if the course format matched their own learning style. Corroborating previous findings, Lucy Holman's (2000) experiment noted that academic performance showed little statistical variation between freshmen groups receiving live classroom library information literacy instruction and those receiving the instruction online. Post-test surveys, however, indicated that attitudes toward learning and self-confidence in projected use of the skills learned were more positive for those in the live presentation group. Holman suggests that one possible reason for this is that many college freshmen feel more familiar with and comfortable in a classroom setting and with the traditional teacher-generated style of learning.

Stephens (1994) emphasizes the importance of matching methods and purpose; exposition, direction, discovery, and a variety of other methods must take into account learner differences as well as the characteristics of the information to be learned. Bemoaning the fact that in comparison to other sources of information and learning such as television, magazines, and the Internet, school is nonengaging, Sousa (2001) highlights the importance of relevance with a connection to past experience and of teaching and assessing for the whole brain, an idea endorsed by Howard Gardner (1993, 1999) and Masek (2000). Onwuegbuzie, Bailey, and Daley (2000) caution instructors about the relationship between the learning style of the student and that of the teacher. Their investigation disclosed that when the learning style of the teacher and student matched, student achievement scores were higher than for those in which the student's learning

style did not coincide with the instructor's. The authors warn educators to carefully target all students, including those with learning styles that differ from their own.

Metacognition

In their discussion of learning style preferences, Reid et al. (1998) clarify that although students seem unwilling to participate in group learning, they are not unable to learn through these situations. Others support this contention of the importance of gaining experience and expertise in learning styles other than the one preferred (Mack & Delicio, 2000; McClanaghan, 2000; Smith & Pourchot, 1998). Since studies on academic achievement indicate that the most important correlate is the fit between teaching style and the learning style preference of the student (Beets & Lobingier, 2001; Germain et al., 2000; Holman, 2000; Onwuegbuzie et al., 2000; Sankaran et al., 2000), it is obvious that the broader the learning-style repertoire of a student, the greater the likelihood of a successful college academic experience.

Roth (1999) underscores the significance of metacognition in educating learners to become both more effective learners in the present and more autonomous learners in the future. Because the explosion of information has made it impossible for students to ever completely master a subject during college, she urges institutions to concentrate on metacognition, "the lifelong skill of learning how to learn" (¶ 12). Librarians must teach critical thinking and metacognition as part of information literacy instruction rather than as individual skills, in order to encourage the transfer of skills from one discipline to another (Herro, 2000; Smith & Pourchot, 1998). Gardner (1999), too, says that metacognition is an important skill but one that should not be taught in isolation from a given discipline (p. 107). McClanaghan (2000) coaches faculty to validate all learning

styles and help learners identify which style fits them best, but then facilitate the development of an ability to go beyond their preference and use other learning styles, since their preferred style will not always match teaching styles. However, it is vital for instructors to consciously exercise a variety of styles to accommodate as many learners as possible so that students are at times addressed in their preferred style.

Using Active Participation and Group Learning With International Students

Although Americans embrace experiential learning, the appeal is not duplicated in other cultures throughout the world (Althen, 1994; Kathman & Kathman, 1998). Their experiences with Japanese students, for example, disclosed negative responses to group work. The students rejected the concept of "assertive verbalization," (p. 189), disagreed with the concept of the teacher as a facilitator, and denied that hearing from others in class is as important as teacher-directed learning. McClure's (2001) work with postgraduate Chinese students studying in Singapore exposed similar opinions. McClure's narrative discusses her attempts over several semesters to introduce group work and familiarize students with successful active learning experiences. Kinsella (1996) relates her conversations with international students, who felt that hearing from other students "'confuses us; it is better to listen to the teacher who knows'" (p. 30). A background of disappointing experiences in interacting with English speakers and lack of practice in discussion skills may make international students reticent to continue group learning. Consistent with research with native English speakers, Pinheiro's (2001) international Ph.D. students, representing Africa, Asia, and Latin America, reported negative attitudes toward the "facilitator teacher" who initiates discussions but leaves students to discover meaning for themselves. All of the interviewees desired a professor

who directs and focuses student learning and shares experiences and expertise with students.

International students may dislike group learning for a number of reasons. One is unfamiliarity. Students who have learned by the "passive receptacle" approach will probably not appreciate cooperative learning at first (Meyers & Jones, 1993, p. 162). Collaborative learning also presents philosophical or moral difficulties (Hansen & Stephens, 2000). They note that students typically dislike group learning because of learned helplessness, low tolerance for challenge, social loafing, political correctness, anxiety over their peers' evaluations that impede honest discussion, and a fixation on learning as a product rather than a process. Hansen and Stephens stress that these attitudes must change in order for cooperative learning to become an effective teaching method. Alison King (1993) elaborates on the need for giving individuals in a group the incentive to help each other learn and the need for encouraging interdependence. Often, successful group work experience itself results in an attitude shift. A librarian lecture/demonstration followed by individual completion of a worksheet was compared to small-group completion of the worksheet without any librarian participation other than a brief introduction of the assignment (Prorak, Gottschalk, & Pollastro, 1994). The pretest measured confidence in performing library searching and asked students their preferred method of instruction. Responses indicated 50% preferred lecture; 37% preferred working in small groups; and 14% preferred independent work. These results confirm other survey conclusions that teacher-driven instruction is generally preferred. Posttest scores on the skills test and ratings of confidence level increased for both groups, with no apparent relationship to the format of the instruction, to the reported preferred method of

instruction, to the preinstruction confidence level, or to gender. However, responses on the posttest showed attitudes about the effectiveness of the teaching method were generally higher for the small-group method even though pretests revealed it was not preferred, supporting the theory that positive experiences with group learning will heighten positive attitudes about cooperative learning.

Sullivan (1996), who taught English in a Vietnamese university, theorizes that the definition of group work is perhaps different in non-American cultures, influencing international students' attitudes toward American-defined group work. In Vietnam, classes progress together throughout their education, often studying together outside of the classroom. These individuals, acting as a whole, become a lifetime social network. Sullivan observes that silent, passive listening, so often described by writers as the standard method of learning in Asia, was not her experience. She describes how her individual students gained support from the whole class by speaking as one—interrupting each other and branching off from others' statements. A Vietnamese student reported that when he came to the United States to study, he did not like group work since it separated him from the rest of the class, his support, and working in a small group made him feel isolated from the whole (p. 34).

Mori's (2000) work on academic stress among international students indicates that the stress created by constant intense concentration on reading and listening in order to comprehend English could be alleviated through group work in which the responsibility is not individual. Reiterating that advantage for all students, Dolores Fidishun (2000) states that group learning allows students to experiment without being solely responsible in assessment. Although the benefits of cooperative learning are well

documented, not all students gain the same benefits from cooperative learning (Oxford, 1997). Those international students who deal well with uncertainty are more suited to cooperative learning, and gifted students who prefer individualistic learning may be more discouraged than challenged through group learning. Promoting positive interdependence by assigning roles to members, by identifying a clear group goal to which each must contribute, and by defining group accountability as part of the grading or assessment will make group learning less stressful for international students, Oxford advises.

Sometimes cooperative formats interfere with learning for international students who may not want to admit the deficiencies of others in the group or do not want to achieve ahead of their peers—so a group will rise only to the level of its weakest member (Lee, 1991). Confirming Reid et al.'s (1998) findings that international students often resist group learning, DiMartino and Zoe (2000) conjecture that sometimes the resistance may be more related to social rules about behavior and relationships than to learning styles. For example, in some cultures, the presence of an older male in the group necessitates that he be the default leader whose opinions are accepted even if wrong or if he is the least knowledgeable in the group. Kinsella and Sherak (1998) echo these observations and suggest not overusing group work with international students and making sure the group tasks are designed well. The chapters in Reid's edited book (1998) detail many useful recommendations for the design and use of group work with non-native speakers of English. Learning styles are not innate nor are they unalterable, but they are ingrained. All learners are capable of using all learning styles, but some students are less willing to participate in certain experiences without the assistance of the teacher. Students tend to want to remain with what has worked for them in the past, so teachers

must help international students risk incorporating new learning styles to become more flexible learners (Kinsella, 1996; Kinsella & Sherak, 1998).

Incorporating principles of adult learning such as the need for self-direction and relevance to experience can assist the instruction librarian in planning sessions that will speak to these needs of international students as adults. College international students are often not-quite adults, impacted by technology and a consumer's viewpoint; librarians should acknowledge these variables and attempt to use technology wisely and highlight benefits of becoming information literate. The American-valued use of experiential and cooperative learning experiences and learning style preferences in relationship to teaching styles should also influence the librarian's design of information literacy instruction for international students.

CHAPTER 5

TEACHING INFORMATION LITERACY TO INTERNATIONAL STUDENTS

Because of the existence of library and computer anxiety, as well as faculty assumptions about student research abilities, for decades librarians have offered bibliographic instruction sessions to enable students to efficiently use the library's resources. These sessions often included general orientations to the physical facilities, the details of using available resources, and an explanation of services offered. Spurred on by advances in technology, information literacy has become a recent focus in user education to supplement locating skills with evaluation skills (ACRL, 2001). Wan et al. (1992) claim many international students, finding the new educational environment of an American university too overwhelming, "wrap themselves up in their academic struggles" (p. 620). Their stress is then compounded by the self-created isolation from the campus community, which could offer support. The authors recommend that since institutions cannot eliminate the stressors of language difficulties and differences in education systems, the key is to reach out to international students, teaching them ways to cope with their stress. A coordinated program of orientation to the library, teaching research skills, and instruction in critical thinking can assist international students to reduce academic stress and increase the likelihood of success in American education.

Communicating With International Students

Communicating effectively with international students, especially those whose English language skills are limited, is of paramount importance in the teaching interactions that librarians experience. Stephanie Zimmermann's (1995) analysis of communication experiences on an American university campus indicates that interaction with Americans is the greatest variable in international students' adjustment to American culture. Just as positive contact with American students diminishes social stress and increases general social adjustment for international students, relaxed contact with library staff contributes to lowered library anxiety and enhances the ability to acquire skills for effectively using the American university library (Kline & Rod, 1984; Mosley, 1997).

Educators must not discount the role of nonverbal behavior in communicating with international students. Areas of potential problems include body movements, facial expressions, gestures, concepts of personal space, and eye movement (Fieg & Yaffee, 1977; Kathman & Kathman, 1998; Morain, 1987). In some societies, eye contact between student and teacher is inappropriate; nodding the head may imply agreement or it may mean the opposite. Even specially trained cultural experts cannot master all the variant connotations of nonverbal communication among cultures. The instruction librarian, however, should be aware of the intertwined difficulties inherent in cultural differences—of international students failing to understand instructors and instructors failing to understand international students.

Clear verbal exchange is equally crucial in teaching second-language students. Meyer (2000) advises instructors to lower four barriers in order to make instruction meaningful: cognitive load, culture load, language load, and learning load. She urges not

to overload the number of concepts, especially new ones, taught in one session. Teachers must also be careful of cultural differences, both in actual meanings of words and in expectations of how and when "talk" happens. The language load should not be weighed down with technical, academic vocabulary in either written texts or teacher talk, and the learning load must also be carefully balanced. Some activities are difficult for international students because of the pace. For example, class discussions in English, in which American students speak in incomplete phrases and brainstorm ideas at a rapid speed, are often too intense for NNSE to compete with native speakers.

Researchers offer similar advice for those teaching students whose native language is not English: (a) avoid complex sentence structures, (b) do not use slang or cultural allusions, (c) check often for comprehension, and (d) use repetition and synonyms and elaboration to enhance understanding. Many writers comment that using a louder voice or slowing down speech is not only humiliating for the listener, but also actually makes comprehension more difficult (Greenfield et al., 1986; Natowitz, 1995; Rosenthal, 2000). Macdonald and Sarkodie-Mensah (1988) counsel librarians to code switch (i.e., adjust language patterns and vocabulary to accommodate the needs of the listener), but not to the point where speech patterns or syntax deteriorate into an embarrassing version of baby talk.

Most of the ideas for communication with L2 students span content borders and are appropriate applications for all age levels and subject matter, including information literacy instruction at the university level. Suggested issues to consider include: (a) use comprehensible input [use vocabulary appropriate to the level of the audience]; (b) augment speech with gestures and graphics; (c) provide a scaffold for individual skills

and concepts; (d) limit the number of new concepts introduced at one time; (e) avoid jargon and use a clear, slow, but normal speech pattern; (f) make frequent comprehension checks; and (g) paraphrase and elaborate to enhance understanding. These general teaching techniques will assist the instruction librarian as well as the classroom faculty (Y. Freeman & Freeman, 1998; Greenfield, 1989; F. Jacobson, 1988; Kamhi-Stein & Stein, 1999; M. Liu, 1995).

Although international students may be part of the English As a Second Language program to improve their English use, the same students may be well versed and competent in their subject disciplines, and Rosenthal (2000) reminds faculty not to view ESL programs as remedial coursework. Librarians as well as classroom teachers can facilitate improvement of English language skills by using visual accompaniments, by writing down important points or tasks, and by allowing extra time for responses. International students' reading skills may be of higher quality than their speaking and listening skills (Preston, 1992), and Fu (1995), a former international student from China, observes, "As a non-native English speaker, I need more time than others to phrase my thoughts before I speak; as a result, often the topic changes before I get a turn [to speak]" (p. 198). F. Jacobson (1988), M. Liu (1995), and Preston (1992) each encourage rephrasing and elaborating concepts, not simply repeating phrases that were not initially understood. Graves (2001), on the other hand, maintains that the speaker should repeat sentences in exactly the same way as initially spoken. She explains that the listener, who on first hearing failed to comprehend several words of the sentence, is now listening carefully for those same words when the speaker repeats the sentence. If the speaker instead uses completely different words in an attempt to clarify meaning, the listener is

further confused by failing to hear the problem words for which s/he was attending. Although Jiao and Onwuegbuzie (1999) propose using humor in presentations, M. Liu (1995) and Macdonald and Sarkodie-Mensah (1988) warn that humor is not usually successful with NNSE since it often employs slang, plays on words, or cultural allusions that are beyond the grasp of most international students.

Interaction with former NNSE students about effective and ineffective teaching practices revealed that individual help, games, use of visuals, and hands-on experience were appreciated (G. Thompson, 2000). Most important was the ability of the teacher to create a welcoming environment, to be patient, and to build confidence in the students. Many educators and librarians articulate this need for making international students feel comfortable and secure. Moeckel and Presnell (1995) maintain instructors need to convey to international students that learning by making mistakes is an acceptable American value. International students interviewed at Biola University in La Mirada, California by Emigh (1991) reported what helped them the most in their adjustment to the academic community was faculty spending time with them on an individual basis, so that they felt cared for.

Communication problems are culturally compounded, sometimes by gender, sometimes by social status, but perception of approachableness is paramount (Wayman, 1984). "A leader in the international community explained that some [international] students will steal books or even catalog cards to avoid approaching staff they consider unfriendly" (p. 340). Also discussing the role of affectivity, Hall (1991) urges librarians not to waste time trying to develop just the right approach to working with people of color. Instead he endorses the importance of connecting with students on a personal

level—"relationship is the key to effective pedagogy" (p. 324). This is repeated by DiMartino and Zoe (2000) who perceive that with the increase of students accessing online library databases from locations outside the library, librarians are less able to personally help researchers when they aren't physically present. The irony, DiMartino and Zoe observe, is that personal interaction, which benefits non-native students most, is the very element eliminated when remote searching occurs.

Effective communication with international students can be improved if the faculty and library staff receive training in intercultural communication and cross-cultural understanding (Brown, 2000; DiMartino & Zoe, 2000; Greenfield, 1989; Greenfield et al., 1986; M. Liu, 1995; Natowitz, 1995). Greenfield et al. (1986) describe the workshop they developed to train their library staff. One portion is an explanation of the interlibrary loan procedure, delivered in a language not spoken by any of the staff, to more clearly highlight the emotions of international students attempting to learn about the library. Riedinger (1989) underlines the idea that there must be a double orientation—training library staff to be sensitive to international students and training international students to be sensitive to American ways. Success is a function of both the host institutions and the international students cooperating, Ogbu (1991) insists, and both guest and host can achieve accommodation of the other without demanding assimilation of the international student into the American culture.

Understanding how cultural values affect communication between individuals and how instructors can facilitate better comprehension are two of the most important aspects of teaching international students, secondary only, perhaps, to the creation of an atmosphere of trust and security. Moorhead (1986) describes the program built at

Roosevelt University's library for international students, "Essentially we were out to build two foundations, one based on useful information and the other based on trust" (p. 586).

Introductions and Orientations to the Library

Educators and librarians alike recommend offering a separate introduction session or program for international students with more printed material, less complicated and slower-paced speech, and a deliberate acknowledgement of special challenges that might be encountered by international students (Bilal, 1990; Cope & Black, 1985; DiMartino & Zoe, 2000; Hoffman & Popa, 1986; Z. Liu, 1993; Moeckel & Presnell, 1995; Peck, 1992; Preston, 1992; Wayman, 1984). On the other hand, Jiao and Onwuegbuzie (1999) maintain that these special sessions do not alleviate anxiety for international students, and although they agree that an orientation is important, Kumar and Suresh (2000) argue that isolating international students into a separate program implies that all international students are alike in their individual needs concerning the library. The authors feel that it is better to integrate their orientation into introductions for American students. Mark and Jacobson (1995) disagree, explaining that some conventions commonly known to Americans may be unfamiliar to international students. For example, that a shelf tag *C-G* means call numbers beginning with the letters C, D, E, F, and G will be located in that aisle may be a concept unknown to some international students. The *Last name, First name* organization of catalogs and encyclopedia entries can be a constant confusion for some international students—just as it can be for an American librarian, trying to decipher which of three elements of a Korean name is the one by which the student is referred.

Frances Jacobson (1988), Ziming Liu (1993), and Bonnie Preston (1992) argue that international students need a physical library tour early in their program, using native language speakers if possible, to avert initial anxiety. Others believe that these library tours tend to be introduced at the most distracted and anxious time—at the beginning of the semester when it is even harder for NNSE to listen attentively and understand (A. Downing & Klein, 2001). The authors advocate instead orientations at the point of need, when the first assignment requiring library use is introduced. Baruch College, which has the highest population of international students in the United States, offers a text and audio multilingual web tour of the library. A. Downing and Klein make it clear that although this enhances the usefulness of instruction by offering initial, basic instruction in the students' native languages at a pace each student can control, it does not and should not replace face-to-face interaction with librarians.

Kumar and Suresh (2000), Z. Liu (1993), and Ruelle (2001) assert that international students need printed materials along with a physical orientation and verbal description. It is also important to provide sufficient written material during instruction lectures or demonstrations so the international students do not have to concentrate on note-taking while simultaneously trying to comprehend oral input (Moeckel & Presnell, 1995). Handouts provide the security that if they do not understand the librarian's words, students have a printed document that can be studied privately. Rutgers University Libraries (1998) and S. Thompson (1997) offer examples of lessons and vocabulary lists specifically tailored for international students, which detail general reference use, classification systems, call numbers, and use of the catalog.

Although written material and verbal instruction are both useful, active learning is equally important (Fidishun, 2000; Z. Liu, 1993). Emphasizing that including practice at the point of instruction is particularly important for international students, Moeckel and Presnell's (1995) five-part model includes an instructional program for international students in which a hands-on tour is included. Cope and Black (1985) advocate that at least half of all introduction sessions should be active, presenting opportunities to apply information and diminishing the stress of trying to mentally absorb too much verbal information at one time. This was echoed by the freshmen in a First Year Seminar course who found the physical tours of the library too confusing and too intimidating (Varner, Schwartz, & George, 1996). If this is true for native speakers of English, it is likely even more true for international students. The freshmen in the study reported mild indifference to library instruction although they thought it was valuable, but negative attitudes were reported if the instruction did not include hands-on experience. In a similar case study, Dabbour (1997) found that 91% of the freshmen responded positively to the California State University at San Bernardino program. However, 89% of those surveyed indicated they would change the orientation to include more use of computers (p. 305) even though the orientation did include some active participation. It is apparent that active learning must be an integral component of any library instruction program.

Librarians view consideration of the emotional dimension of an introduction to the library vital. In the tradition of Constance Mellon (1986, 1989; Mellon & Pagles, 1987), K. Downing et al. (1993) exhort librarians to include the goal of feeling comfortable and positive about the library as a core purpose of any session. A focus group of undergraduate international students discussing their library expectations

emphasized they wanted the librarian to do their initial sifting for them, to tell them which were the best sources to use, and to select the best results for them. Introductions to services such as Reference must make it clear to international students that these decision-making tasks are not the librarian's role, but are instead the individual student's responsibility (Li, 1998). Hoffman and Popa (1986) describe the program at the University of California at Davis, which made use of small groups of international students paired with a specific librarian with whom to create a relationship. The authors emphasize the importance of generating a sense of belonging and assurance, as do Kumar and Suresh (2000). Bilal (1990) proposes the use of a buddy system in which American students are paired with individual international students to assist them in their library problems. Although the connection with librarians or American students is an essential feature in international students' success in the library, there is also a danger. International students may view the Americans as "universal aunts" (Jordan, 1997, p. 213) who they assume will act as a buffer for all library problems and who will find needed material for them. This concept of faithfully returning to the person who has given previous help or with whom you feel comfortable is hardly restricted to international students, but in many cultures it is more than a desire for familiarity. Some societies are built around the concept of exclusively dealing with one contact, with the mutual expectation and obligation of repeat-customer loyalty and receiving special favors and treatment. It is important that librarians exhibit a welcoming attitude and a helpful spirit but not let the relationship deteriorate into a situation where the international student is dependent on one person for library instruction. The goal of all assistance must be eventual independence.

Research Skills

Most librarians agree on the concepts they feel are necessary for students to master in order to be information literate: the ability to (a) effectively plan research, (b) to efficiently gather information, (c) to critically evaluate information and sources, (d) to properly use information, and (e) to ethically acknowledge sources (ACRL, 2001). Opinions and ideas abound regarding how those goals should be accomplished and what form hands-on experience and active learning might take in the process. Nearly all authors, Conger (2001); Cudiner and Harmon (2000); Dewald (1999); Drueke (1992); Felder and Brent (1996); Fidishun (2000); Grealy (1998); Holman (2000); and Kamhi-Stein (1996) among them, advise the use of combining librarian explanation or demonstration with opportunities for students to practice concepts either as individuals, in pairs, or in small groups. DiMartino and Zoe (2000) feel that 20% of information literacy instruction with NNSE should be description or demonstration, and 80% should be hands-on experience. "Library Jeopardy", "Good Site vs Bad Site", crossword puzzles, and a game in which clues are given to help find an article citation, are activities Bicknell-Holmes and Hoffman (2000) include in their review of the use of discovery learning in information literacy instruction. Other examples of group learning projects that deal with database construction and headings and the comparison of scholarly and popular periodicals are offered by Mark and Jacobson (1995). Gradowski, Snavely, and Dempsey's (1998) and Iannuzzi, Mangrum, and Strichart's (1999) books incorporate ideas for lessons and offer actual handouts, forms, diskettes, and teaching aids. Since the purpose is to allow active participation, and each of the ideas and lessons includes only a small, contained research skill, they would be ideal for use with international students.

Even demonstrations are passive and receptive, according to Conger (2001). Active learning, she says, allows analysis instead of receipt of information. Rather than explaining what Boolean operators are and then demonstrating a search using them, she advocates conducting two searches, one of which employs Boolean operators, and then asking the class why results were different. Conger's article describes a program of teaching online resource strategies without any hands-on computer use by the students. She uses creative brainstorming in small groups and class discussions so that the class discovers the same information the librarian could have passively taught: which sources to use for research, which are best for which purpose, and how to best construct a search strategy. Conger insists, "The learning takes place not because the student is sitting in front of a computer, but because she is intellectually engaged with the problem before her. The computers are not necessary; the engagement is" (p. 313). Anticipating arguments that international students do not welcome small group work and are not comfortable with creating their own learning, Conger claims she has used the method with international students, including entire ESL classes, and has found it successful.

Active learning is important, but Cooper, Robinson, and McKinney (1994) remind instructors to structure the activities so that students must "learn something, not just do something" (p. 83). Gresham's (2001) experience in a new electronic library classroom proved that technology can offer learning experiences through concrete examples. However, she warns librarians not to abandon concept-based instruction and to continue a commitment to teaching that promotes lifelong information literacy. Gresham suggests that instruction should allow learners to experience multiple cycles of Kolb's (1984) design of concrete experience, reflective observation, abstract conceptualization,

and active experimentation, emphasizing, along with Christison (1999b), that reflection is equally as important as experimentation. The content of instruction is more important than the technique (Shoffner et al., 2000). Cohen (2001) encourages librarians not to teach tools since they change so often. Information literacy instruction, he maintains, must focus on the principles of searching, not on the features of a particular database. Blandy and Libutti (1995) concur, pointing out "automated systems with a three- to five-year shelf life result in presentations and skills with a three- to five-year shelf life" (p. 281). Tool-based learning, they contend, is not conducive to lifelong learning. In a comparison of a tool-oriented demonstration with a process-oriented lesson that focused on cognitive strategies, data indicated that those involved in the process-orientated session garnered better skill-test scores, reported lower levels of library anxiety, and exhibited more positive attitudes toward the library. Additionally, the classroom faculty who analyzed the resulting research papers and bibliographies considered them more focused and more interesting than those from the tool-based instruction group (Zahner, 1993).

Seiden, Szymborski, and Norelli (1997) examined undergraduates and discovered that most have a poor understanding of the digital information environment. The authors found that students often chose to search in a database because a faculty member or a friend told them about that database—even if it was inappropriate for their topic, and they typically considered the World Wide Web to be equally reliable as other subscription databases. Seiden et al. observed almost no use of controlled-subject searching, of either printed or online thesauri, and of the subject tracings to lead searchers to other sources on the same subject. Students seldom tried synonyms if their initial search word did not

produce adequate results, and they often attempted to use protocols from one database that did not function the same way in another database. Since most undergraduates do not have in-depth experience with their subject, they most often evaluated articles by article title alone, ignoring abstracts and failing to use journal titles to determine if an article was appropriate for academic work. Gresham (2001) states that librarians must not simply transfer passive teaching techniques into the electronic environment, and technology must relate to the learning goals, not simply be a method of transmitting information (Meyers & Jones, 1993). Students want to do their research on the Internet because they perceive it is superior in speed, currency, and ease. Librarians must show students that online subscription databases offer those same qualities plus the advantage of quality (Kapoun, 1998).

A study of library self-efficacy by Ren (2000) revealed that students need adequate searching practice so they can experience accomplishment and overcome feelings of frustration or of being overwhelmed by too many choices and results. People will continue activities that have yielded success but avoid those that have produced failure (Sousa, 2001), and M. Liu and Redfern's (1997) investigation validated that statement. They concluded that the second greatest correlate to success in using the library was success itself, which in turn developed self-confidence and led to additional successes. Although the above studies were not conducted specifically with populations of international students, it is safe to assume that non-native speakers of English would exhibit similar behaviors and attitudes.

Specifically discussing potential problems NNSE searchers might face, along with strategies for overcoming the problems, will increase the likelihood of successful

independent experiences (DiMartino & Zoe, 2000; M. Liu, 1995; Z. Liu, 1993; Natowitz, 1995). Mark and Jacobson (1995) recommend demonstrations that show some searches are ineffective, followed by strategies to use in avoiding and rectifying failed searches. Cahoon (1998) agrees, arguing librarians must focus on "error recovery" (¶ 27) and the transfer of skills learned to other disciplines and situations. Librarians need to share their expertise with students since students benefit from advice about how long to spend on a source before giving up or from an estimate of how much time and effort it will take to locate three to five useful sources on a topic (Blandy & Libutti, 1995). DiMartino and Zoe (2000) concur, explaining that purported user-friendly products often have hidden difficulties that the librarian is best suited to examine. The Keyword box in Lexis-Nexis Academic Universe™, for example, searches only the headline and lead paragraph, not the entire article text as most people assume, and knowing this peculiarity can prevent frustration that will occur in searching that database. Emphasizing the importance of using Help or Search Tip screens to determine how a database works will facilitate overcoming disenchantment about using databases rather than using Internet search engines.

Some authors observe that difficulties with the English language can cause problems with database searching skills that are dependent on word choice and comprehension. L2 learners often struggle with mastering the concept of Boolean logic and vocabulary-based search strategies, foundational to online searching. Vocabulary is the biggest impediment to effective searching for international students, and synonym use, a necessity in keyword searching, is a difficult skill to master, especially for speakers with limited English vocabulary (DiMartino & Zoe, 2000). Macdonald and Sarkodie-

Mensah (1988) specifically encourage the use of analogies with ESL students in explaining certain library terminology and library concepts, such as associating controlled-subject construction with the phone book yellow pages. Librarian-guided exercises in subject-heading tracings or descriptor links in catalogs and databases can also clarify differences between keyword searching versus subject-heading searching (Kamhi-Stein, 1996).

With the reminder that the "brain is a pattern-seeking device," Christison (1999a, ¶ 17) admonishes teachers to offer emotional hooks of need, novelty, and emotional meaning to aid students in understanding research strategies. Sousa (20001) claims it is urgent to teach the unique attributes of concepts so that learners can effectively retrieve information they learn since the brain seeks novelty (p. 27) and stores information in the memory by similarity, but retrieves it by difference. So that the pace can be slower to give extra time for comprehension, Greenfield (1989) alleges that what might be taught to American students in one lesson should be stretched to three sessions with international students. DiMartino and Zoe (2000) and Greenfield (1989) add that that it is useful to choose sample topics for search demonstrations that are relevant to international students and that show cross-cultural understanding.

Critical Thinking

In her 1991 article, Cerise Oberman compares the paralyzing dilemma faced by shoppers with too many choices of breakfast cereal with the equally paralyzing dilemma faced by students with too many choices of databases and search results. The outcome, she says, can be the same: the shopper or the student either gives up in the face of overload and withdraws from the situation or simply chooses the easiest or first thing

available. Students need literacy skills—the ability to reflect on, select, and evaluate information—in order to overcome push-button, mindless information gathering, which can result from an overload of resources, quickly located on the Internet. Because the novice searcher "lacks the most important instrument for weeding through those matches—informed judgment" (p. 487), Kissane and Mollner believe that technology has made research more difficult. Writers throughout the literature highlight the importance of information literacy—abilities for evaluating information as well as locating it (ACRL, 2001; Fister, 1992; Fullerton & Leckie, 2002; Herro, 2000; McDermott, 2000).

Researchers need to learn to filter through the mountains of available sources, and librarians have the tools to teach those critical skills (Blandy & Libutti, 1995). One of the most important responsibilities of a librarian is to help students understand and make judgments about the appropriateness of information found (Kirk, 1999), and Brem and Boyes (2000) indicate that librarians must teach students to develop an "evaluative stance" (¶ 16). Davis and Cohen (2001) and Davis (2002) note the recent increase of Internet web site citations replacing citations from scholarly books and academic journals in bibliographies. They propose that most undergraduates are unable to distinguish between appropriate and inappropriate sources, and they challenge professors to be more prescriptive in their requirements for critical evaluation. Reinforcing this observation, librarian Kapoun (1998) calls for faculty and librarians alike to give instruction and experience in critical evaluation of web sites as well as printed materials. We should be looking at the learning tasks, not the teaching tasks, argues Vella (2000), complaining that the teacher spends too much effort in planning the teaching process without enough consideration given to the role of the student in learning. Developing critical thinking

involves questioning, and the level of thinking in a classroom is influenced by the nature and quality of questions asked by the teacher (A. King, 1994; Vella, 2000). Cooper et al. (1994) illustrate encouragement of critical thinking through guided reciprocal peer questioning, jigsaws, structured controversy, think/pair/share, and other activities, all of which combine active participation and small group work with critical thinking exercises.

Students from non-American educational systems may find the analysis of classroom assignments and the ability to evaluate results from databases especially difficult since this type of reflection may not be stressed or even valued in their home countries. Brown (2000), DiMartino and Zoe (2000), A. Downing and Klein (2001), Emigh (1991), T. Jacobson and Williams (2000), and Korean Constituents Think Tank (1990) all discuss the need for librarians and faculty to pay special attention to international students in this regard. However, this special consideration must not take the form of stereotyping individual students or culture groups (Kumar & Suresh, 2000). Since international students do not have the background of American education or American culture, librarians must recognize that evaluation skills include more than the simple choice of a scholarly journal over a popular magazine. When the titles *People* and *TESOL Quarterly* are equally unfamiliar, determining which periodical is appropriate for research takes on new difficulties. Showing that some databases identify peer-reviewed journals or give other useful source descriptions may enable international students to make more informed choices. Metacognition and critical thinking must be taught as generative skills so that students can create their own strategies from those already known and apply them in new situations (Taraban, Rynearson, & Kerr, 2000). Evaluation practice done in small-group settings can remove the stress of individual accountability,

as well as offer opportunities for observing others' strategies for reflection. Even so, particular care must be taken when using small group exercises with international students so that group roles are clearly defined, and the task is structured to require interdependence and a group product (Reid et al., 1998; Thomas & Harrell, 1994).

Collaboration With Faculty

Although Perry (1998) talks about inserting risk-taking into the learning environment so that students can grow cognitively, and there is much written about group work and collaboration between students, there is much less written about the collaboration between faculty members. Much of the existing discussion about collaboration occurs within library literature, promoting the collaboration of librarian and classroom teacher and often an ESL specialist (Barclay & Barclay, 1994; Bell & Benedicto, 1998; Cudiner & Harmon, 2000; DiMartino & Zoe, 2000; Furlong & Roberts, 1998; Hurren, 1993; F. Jacobson, 1988; Macdonald & Sarkodie-Mensah, 1988; Peck, 1992; Preston, 1992; Riedinger, 1989; Russell, 2000; Varner et al., 1996).

Fullerton and Leckie's (2002) overview of the approaches to library instruction mentions that course-related demonstrations or lectures requested by individual faculty are the most commonly used method. Curriculum-integrated instruction, although widely advocated, is less common because of the high degree of coordination needed between the library and individual faculty members and even more so with the entire department or school and any university-wide curriculum committees. Dewald (1999) and Dupuis (2001), in their analysis of online tutorials, emphasize that even library tutorials need to be related to course study or assignments. Collaboration between the library, the classroom, and the ESL program is supported by Hurren (1993), Kahmi-Stein and Stein

(1999), and Macdonald and Sarkodie-Mensah (1998) so that instruction will be relevant to actual classroom needs and will offer opportunity for authentic practice. The authors advocate "adjuncted lessons" in which the librarian, after a subject assignment has been given, teaches an information literacy lesson specifically targeted to the classroom assignment. The ESL professional follows up the classroom subject instruction and the information literacy instruction with sessions that concentrate on the writing skills needed for completing the assignment.

At the request of faculty, Bell and Benedicto (1998) experimented with a discipline-specific research course that could be taken as an optional companion to the faculty-taught course in Business, Journalism, or Women's Studies. About half of the students who chose to enroll in the librarian-taught research course were international students. Although only a small percentage of the total course enrollment chose to take the companion library course, those who did gave it high marks and thought it worthwhile. At Valparaiso University, Daugherty and Carter's (1997) course for psychology students produced similar results. Librarian Dickstein and lecturer McBride (1998) collaborated using a class e-mail bulletin board system to discuss the research of their topics. Though the trial did not work as well as planned, one advantage of the format was that, although the librarian fell into the role of giving reference assistance on a personal level, all class members could read and benefit from the postings. In subsequent semesters, overwhelming class sizes made the collaboration take a different form as the librarian reverted to in-class demonstration/lectures. Individuals were required to list key sources they had discovered on the class electronic bulletin board, together with an analysis of the strengths and weaknesses of the sources. One positive

outcome was that through the e-mail assistance of the librarian, attitudes toward the library improved.

Collaboration between the library and the classroom is especially important with international students (Kamhi-Stein, 1996). She describes California State University at Los Angeles' Project LEAP in which a content faculty member, an ESL teacher, and a reference librarian team teach a ten-week program of hands-on database searching, integrated into a multi-step writing assignment. The library instruction is both active and cooperative as small groups create search strategies and conduct the hands-on searches and evaluations together. The workshops have grown from a few experimental classes to use throughout the university in connection with 60 to 70 undergraduate courses. Responses from international students indicate that, from their point of view, the project has been successful.

Teaching information literacy to international students is, in some regards, comparable to teaching it to American students. The importance of orientations to alleviate anxiety is not exclusive to international students, nor is the importance of hands-on active learning with database searching. Even more so, critical thinking instruction is imperative for all students, not just NNSE. In another sense, international students face some special challenges in regard to information literacy that perceptive librarians can address. Offering adequate print materials to accompany verbal presentations is one step that can be taken. Another is alerting international students to potential problems with physical facilities and database searching and then offering solutions to the difficulties. A third facet of assistance is to enlist the assistance of the ESL faculty as well as the content faculty so that library instruction can be course-related or focused on given assignments.

Because international students are likely to suffer from the "cereal syndrome" (Oberman, 1991) created by an overload of potential resources and database results, suggestions and hints from instruction librarians should give international students added clues in their quest for academic success. This is especially true in relationship to critical evaluation skills and elements of database searching that are related to language skills, such as truncation, Boolean operators, and the use of synonyms.

CHAPTER 6

IMPLICATIONS AND APPLICATIONS OF THE LITERATURE REVIEW

Viewing International Students As Guests

Hosts in any situation face the delicate balance between accommodation of the guest and maintenance of their own standards. Ogbu (1991) maintains that this accommodation must be two-way. Hosts will often adapt their meal planning to the preferences of the guests; guests will often graciously eat foods they do not like out of polite respect for the host. Storti's (1999) charge to gain cultural awareness showcases the necessity for understanding that variances in cultures need not generate discord. The realization that there are not only cultural differences, but also individual differences within each culture, should prompt librarians to avoid making assumptions about individuals or assigning motives to others' actions based on their own values. Librarian instructors must, in some sense, play the role of the parent, accepting some behaviors in recognition of lack of knowledge or understanding about American etiquette or library protocols on the part of the international student.

Archer's (1994) discussion of a covert culture highlights that many behaviors and attitudes that Americans take for granted are mystifying to international students. An older woman came to class one day wearing a shirt with a large Playboy Bunny logo on the front of it. Biola University is a Christian university, opposed to the morals the logo symbolizes, and so American students responded with wide eyes and whispered

embarrassment. A gentle friend privately explained the symbolism to the international student, who had purchased the shirt because she liked rabbits. Similarly, a mature man in a black suit and tie approached the Reference Desk to ask a question. He sat down in the chair and removed his backpack, a pink plastic Hello Kitty™ one, which was currently popular with elementary-aged girls. The next person in line, an American not-quite adult, rolled his eyes in disgust. Cross-cultural sensitivity is needed in order to prevent the alienation that misunderstandings can create. Painful cultural adjustment can sometimes manifest itself as a self-focused, persecuted attitude. An international student came to the public desk to complain that the library was prejudiced toward international students. She protested loudly and angrily that both she and her American friend had lost a library book that semester, but the American student was charged a smaller amount than she was. This, she perceived, was directed specifically at discriminating against Asian students. This writer explained that the charges were based on the cost of ordering a new copy of each book, and that the book she lost was more expensive than the book the American student lost. Refusing to accept this explanation, the student made a complaint to the supervisor, but attempts to defuse the situation found little success.

International students may always be and feel foreign on some level (Storti, 1999), and they need understanding hosts. Remembering that international students are "people in transition" (Mori, 2000, ¶ 3) and "sojourners" (Thomas & Harrell, 1994) who stay in the United States a short time should result in the latitude afforded to guests. In the Old Testament, God exhorted the Jews, "Do not mistreat an alien, or oppress him: for you were aliens in Egypt" (Exodus 22:21, New International Version), and Deuteronomy 10:17-19 describes God as One who loves the stranger and asks His people to also love

strangers. Throughout both the Old and New Testaments, exhortations to treat others as you want to be treated should serve as an example that one principle of interacting with international students should be demonstrating empathy and accommodation.

Although international students are guests in the United States, many individuals in American society feel that the onus for adjustment is on the guest alone. International students encounter a myriad of difficulties, such as language comprehension and conversation problems; opposing cultural customs, mores, and values; and educational differences. Kahne (1976) maintains that American universities always put the burden on the foreign student to cope and fit in with the American curriculum, and he argues that American higher education institutions need to become more understanding and tolerant of ways other than their own. Fu (1995), twenty years later, reaffirms that same outlook when she calls for classrooms to become "communities that accept the fact the people learn differently and have different ways of knowing" (p. 214). That repeated pattern occurs in library literature when Brown (2000), DiMartino and Zoe, Hall (1991), and Moeckel and Presnell (1995) offer many of the same recommendations about working with international students that Fieg and Yaffee proposed in 1977. Christison (1999b) declares that each brain is unique, and teachers and librarians must be open to varied interpretations and numerous ways of viewing information. The key to success in education as well as relationships is "to accept others as having a viewpoint that is as worthy of consideration as our own" (Lingenfelter & Mayers, 1986, p. 118).

Kathman and Kathman (1998) pose the difficult issue, "How much should 'they' change? How much should I 'accept' what they do?" (p. 379). This is especially thorny in the library instruction classroom when there are no guidelines to follow, no rules to

maintain. How much accommodation of learning style preferences should the librarian make? If international students dislike group work, is it important not to force American ways of learning on others and instead weigh the risk to international students' attitude against the potential benefit? (Thomas & Harrell, 1994). Rather than leaving them to dictate their own education, Fu (1995) argues that international students often come to the United States to take the opportunity of experiencing the American education system. She maintains teachers should not be afraid of doing something "foreign" with international students as long as a culture's ways of doing things are not belittled. Helping international students reach goals and achieve dreams will be more appreciated than if instructors simply leave visiting students to struggle on their own.

How far should library personnel go to assist international students? Bilal (1990) advocates a buddy system to pair American students with international students to aid them in their use of the library, but Jordan (1997) warns of the danger of becoming "universal aunts" (p. 213). The delicate balance between accommodation of the guest, maintenance of standards, and nurturing independence is no less important in the library than it is in the home. Nevertheless, one vital aspect of working with international students is to regard them as guests, exhibiting a willingness to accommodate and to be empathetic and understanding.

Viewing International Students As At-Risk Students

Viewing international students as guests may accelerate social adjustment, but more than simple kindness is required to help them succeed in their academic pursuits. Obstacles such as language complications and library anxiety put the international student at risk for academic failure. Wan et al.'s (1992) investigation of primarily Asian,

male graduate international students revealed that the person's age and the length of stay in the United States were the variables most related to how much cultural distance, isolation, and academic stress international students faced and how well the individual coped with that stress. The authors advocate making a concerted effort to reach out to vulnerable international students, helping them cope with academic stress.

In some respects, the hurdles which international students face in mastering information literacy are identical to those of native English speakers. However, research indicates that international students are at-risk students as they use the library's resources. Studies on library anxiety document that international students are the category of students most likely to exhibit library anxiety and least likely to successfully use the library (K. Downing et al., 1993; Jiao & Onwuegbuzie, 1995, 1999; M. Liu, 1995). Although lack of prior computer use is not a hardship for most incoming international students (Taylor et al., 2000), and computer anxiety does not seem to be culturally based (Marcoulides & Wang, 1990), Allen's (1993) survey specifies that many international students suffer from a lack of experience with library-specific technology and resources, which compounds anxiety and difficulty in the use of sources.

Cultural differences that affect information use and information-seeking behavior also put international students at risk. Dissimilarity between their home country's education system and the philosophy of American education can create a stumbling block for students studying in the United States. Active participation, the use of group work, and an emphasis on critical thinking both in the regular classroom and in the library instruction classroom may be distressing for those international students who have been accustomed to a more receptive style of learning. Reid (1998) and her co-authors offer a

variety of ideas and suggestions on preparing international students to work in groups and providing successful experiences in active learning opportunities.

Language problems also threaten the international student in relationship to information literacy. "Communication/conversation apprehension" (M. Liu, 1995, p. 125), from fear of appearing ignorant or out of the fear of being misunderstood or misunderstanding others, may inhibit international students in seeking help and thus from receiving and benefiting from the assistance offered by the library. Difficulties with English can also put the international student at a disadvantage when performing database searches that are dependent on proficient use of synonyms, Boolean operators, truncation, and even plurals. Recognizing that effective online searching and evaluation of results rely on high vocabulary and comprehension skills makes it obvious that second-language learners approach library tasks at a disadvantage. It is incumbent on the instruction librarian to call attention to these potential risks and to offer elaboration and additional opportunities for comprehension as well as occasions for successful practice.

Variations in home-country libraries or lack of experience with libraries in general may also put international students in jeopardy for increased library anxiety. Librarians may need to offer a detailed identification of behavioral expectations, existing services, and available resources. Without knowledge of the American library culture, international students are likely to become embroiled in conflicts over library procedures or to fail to take advantage of services that are known by American students, unless there is intervention by the library staff. Notions vary as to whether or not international students should be separated from American students in their library instruction sessions;

nevertheless, authors agree that recognition of some common areas of difficulty will aid international students in avoiding time-consuming and frustrating obstacles.

Storti (1999)'s use of the word *foreign* should be a blunt reminder that international students are at risk because they are different. Although the word *international* is much more appropriate in today's society, it can perhaps blur the reality that international students find America just as foreign as America finds them. Occasionally librarians should allow the word *foreign* to prompt them to more carefully support those whose adjustment to the American university library can be traumatic and can put them at risk of failing to accomplish their academic goals. Although written in the framework of mission work, Lingenfelter and Mayers' (1986) admonition is equally true in the American university library:

> So often in our cultural arrogance we scoff at what we perceive are the weaknesses of those to whom we minister. Tragically, they in turn scoff at what they see as weaknesses in us. This attitude of "vain conceit" creates walls of rejection between us . . . and greatly impairs the work of the body of Christ. (p. 116)

Viewing International Students Just Like Everyone Else

Although they are guests and although they are at-risk students, in some regards, international students are "just like everybody else" when it comes to using the library efficiently. Whether writing about American students or about international students, authors emphasize the importance of human interaction in teaching students. In that regard, international students are just like everyone else, needing respect, understanding, and kindness. Almost every student experiences library anxiety to some degree, and even

a small university library can seem huge and overwhelming compared to a high school setting (Egan, 1992; Keefer, 1993; Mellon, 1986, 1989) or for a graduate student who has not been in an academic arena for a number of years. Both undergraduate and graduate students often exhibit computer anxiety as well as library anxiety (Bradley & Russell, 1997; Gos, 1996; Marcoulides & Wang, 1990). Even if they do not suffer from computer anxiety, most American freshmen enter the university library with limited experiences in searching databases or evaluating sources, just as international students do. For those graduate students who did their previous research before the arrival of online searching and full-text databases, the transition to a new procedure is daunting. International students are not alone in their anxiety.

As adults, international students, like their American counterparts, want their education to be relevant to their immediate needs or career goals, and they expect faculty and librarians to acknowledge and take account of their life experiences. International students, like others, have been affected by the impact of technology, by its quick pace and its anonymity. When Faust et al. (2001) offer suggestions about teaching the "headphone-wearing, itchy mouse-fingered, and frequently paged", they also describe international students.

How should librarians teach the international students encountered in university library instruction classrooms? In one sense, librarians must simply become better teachers, teaching with more acknowledgement of varying styles of learning (Gardner, 1993, 1999; Perry, 1998; Reid et al., 1998), heeding Hancock's plea to engage students in learning by offering a more adventurous style of teaching (1993, ¶ 6). The design, management, and evaluation of cooperative and active learning experiences must be

improved (Dabbour, 1997; Gradowski et al., 1998; Kinsella, 1996; Kinsella & Sherak, 1998; Reid, 1998), and critical thinking, critical reflection, and metacognition as interdisciplinary skills must be highlighted, both in instructional content and experiences offered (Brem & Boyes, 2000; Cooper et al., 1994; Herro, 2000; Kissane & Mollner, 1993; Mark & Jacobson, 1995; Oberman, 1991; Sternberg & Spear-Swerling, 1996). Because international students are consumer-oriented, instructors must take the time to help them make real-world connections to their learning and view active participation as a necessary and valuable contribution of their American education (Althen, 1994; Kathman & Kathman, 1998; Kinsella, 1996; Meyers & Jones, 1993). Teaching librarians must encourage international students to view education as a process and not a product. Because international students are technologically saturated, instruction librarians must recognize the fast-paced, passive ways in which they process information (Faust et al., 2001; Roth, 1999). Educators must foster a variety of learning experiences, recognizing that technology can be an ally, but that it must not be a substitute for human interaction.

Speaking of the strategies for teaching international students, F. Jacobson (1988) maintains that the recommendations given by various educators of breaking down large concepts into smaller components; combining lecture/demonstration with opportunities for active practice; and using handouts to supplement verbal presentations are primarily good teaching tenets and do not reflect international students' needs, but merely the needs of the uninitiated.

> Librarians do not need to become English as a Second Language experts nor do they need to restructure successful instruction strategies and techniques. The skills that librarians have used in communicating with native student populations can

> easily be adapted to intercultural settings, with the addition of more finely tuned levels of sensitivity and awareness. . . . Libraries need to pass on the basic message articulated so well by Kwasi Sarkodie-Mensah (1986)—that the library is an integral part of one's academic journey, that a systematic approach to finding information is a lifetime benefit, and that the person sitting behind the desk is not there to ridicule, but to assist. (p. 632)

Nearly all of the studies cited in this thesis were conducted at a local level with relatively small samples, sometimes not even with representative samples. The conclusions are nonetheless useful, but it is important that each librarian become responsive to her or his own location and population. Librarians cannot possibly make conjectures about every individual's attitudes, learning styles, thinking patterns, or cultural values, whether the individual is an American student or an international student. The important factor is to be aware that differences exist throughout the world and to treat them with acceptance. In essence, "Although we might be doing a work of love with our hands or heart or mind, unless we show people our love in a personal way by interacting with them as individuals, our work will mean nothing to them" (Lingenfelter & Mayers, 1986, p. 89). And that, of course, is what good teaching is all about.

CHAPTER 7

THE REACTIONS OF THE FOCUS GROUPS

Faculty Focus Group

Input from five librarian and classroom faculty members with experience in teaching international students was solicited to compare their perspectives to the literature reviewed in this thesis. Only two broad questions were offered to guide the conversation:

1. Do you think the experience of international students in the university library differs from that of American students? If so, how and why?
2. What do you believe librarians and library staff can do to help international students in their use of the library and its resources?

Responses from the participants mirrored viewpoints in the literature, citing language skills as the major obstacle in the use of American libraries. The librarians' comments focused primarily on the barrier that language creates in the help-seeking behaviors of international students. Librarians clarified that the difficulties were two-way: that specialized library vocabulary or informal, non-standard English words or idioms used by the library staff create comprehension problems for international students, while word choice, pronunciation of English words, and sentence structure by the international students pose obstacles for the library staff. The role of culture in nonverbal communication was also noted as a hurdle for both the international student and the librarian; for example, cultural mores about gender and age, and values such as eye

contact and masking of emotions so that librarians were frustrated when they could not determine if students were satisfied with proffered help or still confused. One participant mentioned the tendency of some international students to speak in a very low and soft voice, contributing to both comprehension difficulties and to the faculty's challenge of appearing welcoming and patient as they requested several repetitions from the international student. In contrast to Kahne's (1976) complaint that international students are always made to shoulder the burden of coping, one librarian indicated that she felt at fault for her inability to understand the communication of some international students.

The faculty also recognized the challenges caused by variations in world library cultures, even to the needed adjustments produced by reading patterns—for example, the English concept of reading from left to right and the idea that each section of six shelves of call numbers reads down like a page before going to the next section instead of reading the top row all the way across an entire aisle before going to the second shelf. Accustomed to retrieval of materials by library staff, an international student at the Reference Desk handed a librarian a card torn out of the card catalog, intending it as a paging slip. This aspect of expectations was also cited by librarians who pointed out that many international students attempt to pressure library staff to perform the actual locating of materials and plead with librarians to make decisions for them about to which sources are appropriate or valuable, confirming the "universal aunt" theory of Jordan (1997, p. 213).

Classroom faculty, in contrast to the library faculty, viewed international student challenges in the library a function of language skills in understanding and interpreting library materials themselves as opposed to problems in locating them. Faculty believed

that few international students had any experience with library computer technology and surmised that most of the difficulty encountered was due to inexperience with electronic databases and online journals. Librarians' experience with American students made it clear to them that few American undergraduate students have much prior experience with library computer technology either and face problems similar to international students'. While classroom faculty tended to assume that technology itself was the problem, librarians recognized that language problems and critical thinking skills were more likely the culprits. Classroom faculty also noted difficulties with a reliance on direct use of the exact wording of sources, with a lack of critical thinking, and an inability or unwillingness to avoid American-defined plagiarism.

Classroom faculty felt that separate instruction sessions for international students and more individual help were the two main ways that library staff could assist the international student. Librarians were less convinced of the necessity for separate instruction sessions since international students are not a homogeneous group. However, recognition that language difficulties require additional thought-processing time and that additional hands-on practice is valuable, librarians conceded that separate instruction lessons could be beneficial for international. A more likely candidate for a specific international-student session, they felt, would be an orientation to the local physical facilities and specialized services offered by the campus library. Library staff recommended informal and formal instruction about cross-cultural interaction for the entire library staff as a strategy for increasing cooperation between the international student and the library's staff.

International Students Focus Groups

Ten international students were consulted to compare their experiences in American libraries with the literature cited in this thesis. Of the ten, six were male and four were female; seven were graduate students, and three were undergraduate students. Several leading questions were used:

1. How do libraries in the United States differ from libraries in your home country?
2. How is doing research different in the United States from in your home country?
3. How can the classroom faculty help you do more effective research?
4. How can the library staff help you do more effective research?

Students verified the difficulties faced by the transition from other classification systems to the Library of Congress classification system and from closed stacks to browsable collections, although several respondents indicated they had experienced both open and closed stacks in different libraries in their home countries. One item reiterated was the initial anxiety of determining which computers or resources would help with their particular need (books versus periodicals) and which location in the building would house the specific subject in which they were interested.

Several participants, especially those who were graduate students and had used university libraries in their own countries, mentioned that although they were familiar with online catalogs and databases, they had trouble adjusting to databases which were "more sophisticated" than the ones in their home libraries and to the large number of separate and specialized databases available. Nearly every contributor expressed frustration over being unable to determine the "right words" to use in search strategies to exactly match their desired subject. Several explained that when they tried to execute a

search that was (what they perceived) identical to what their friend or a librarian had done, they could never produce the same useful results. They wished that librarians would work with them as individuals to teach them to find exactly what they were looking for.

One difference in "doing research" in their home country versus the United States was the requirement by faculty that students "tell where we got all of our information". Keeping track of where ideas were found and creating a detailed bibliography was not only unfamiliar but also frustrating to several students who explained that in their countries, they were not required to credit ideas, only exact quotations. "All of the ideas I get from reading someplace," explained one respondent.

Participants felt that faculty could help international students by giving more direction in describing the types of sources required for a research paper. They also wished that faculty would reserve some class time to let librarians teach students how to use databases and then allow class time for hands-on searching with the faculty member present to help make decisions about which results discovered through databases would be useful in their paper.

In responding to the query as to how the library could help them, many verified that physical tours of the facilities and special workshops on finding a variety of sources, for example, a workshop on how to locate books or on how to find articles, would be useful and appreciated. Most confirmed that although they had received this type of instruction, the sessions included too much information, and they wished a specific skill could be the entire focus of one session. The need for individual practice, not only during or following an instruction session, but individual practice with individual assistance was

desired. Many students discussed feelings of reluctance in asking for help since they felt they should first "try to find it myself". Although the students did indicate they felt the library staff was welcoming and helpful, they admitted their self-perceived limited English skills often discouraged them from approaching the Reference Desk or from continuing to ask clarifying questions even though they did not completely understand answers given by library staff.

It became evident that most international students wanted prepackaged help—one suggested a sign at the front door, listing "all the subjects" with corresponding call numbers and locations of where to find those numbers. Another request was for instruction sheets that would list which database should be chosen for specific topics and then describe how to use each database. Even though a document is available which lists databases related to broad disciplines, such as Education or History or Religion, students seemed to have difficulty deciphering topics such as domestic violence or terrorism as related to databases listed under Social Sciences. Similarly, although Help or Search Tips screens are links in all online databases, the respondents still wanted a printed document for each database that would summarize how to conduct a search that would produce desired results.

Recommendations for Future Research

Despite the fact that there is considerable literature on the use of active learning in library instruction, much of the active learning presently incorporated is hands-on computer searching by individual students. More research on the effectiveness of the use small-group learning in information literacy instruction is needed. This is especially true

in relationship to how active methods and group work can be designed and managed within the "50-minute, one-shot" opportunities that librarians most often receive.

Conflicting opinions on whether or not to offer separate information literacy instruction sessions for international students implies that this area of library literature would benefit from additional examination, particularly the balance between avoiding information overload and identifying potential difficulties. A related area of inquiry might be the dilemma of how, with limited time and staff resources, librarians can effectively offer a measure of the individual help that international students desire.

Another area of continued study should be the weighing of the emotional risks to the international student involved in group work contrasted with the potential benefit of enlargement of their learning style repertoires. How instruction librarians can incorporate group-learning techniques and at the same time encourage stress-relieving successful experiences is a topic worth investigating more thoroughly.

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